

**ESTABLISHED 1848.**

**COLMAN'S RURAL WORLD**

NORMAN J. COLMAN, Editor.

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The State of Massachusetts has expended \$1,150,000 in its warfare against the Gipsy moth. New colonies of the moth were discovered last season in Newton and Georgetown.

**SORGHUM MAKING QUESTIONS.**

In another column will be found another contribution by "Shelby" to the sorghum making discussion. It is a plain, practical and valuable article, one that cannot fail to be helpful to beginners in the sorghum making business. The articles thus far presented have all been valuable—the one in last week's issue by Mr. Frisbie, and those in the August 1 issue. Doubtless there are points on which none of these experienced makers have yet touched and on which beginners would like information. The best way to draw out just the information wanted is by asking questions. Remember that it was by "Young Farmer" asking for information on the subject of sorghum making that this discussion was started. If any one among RURAL WORLD readers wants further information on sorghum making and will put his desires in the form of questions we will try to have these fully answered by some of our experienced sorghum makers.

**EDUCATE THE BOY OF THE FARM.**

The farmer appreciates the value of education and bows almost reverently to the man possessing scholarly attainments. The minister, doctor, lawyer or professor is by the farmer chosen to preside at all social and business gatherings, because these men of the professions have knowledge of things which he is ignorant, and such one can conduct the business in an intelligent manner; while if the farmer had charge he fears matters would be awkward, if not bunglingly done. The farmer may have well defined ideas as to the business, which may be relative to school improvement or some question that touches the general welfare of the community, yet he will relegate the generalship of it to some man who has had school training; this man, in most cases, in rural districts being one of the professions. Thus does the farmer bring discredit on and sink into oblivion the farmer; and when matters of state or national interest are assuming a shape that press upon the farmer's pocketbook, then he murmurs mournfully about farmers having no voice in enacting laws. Did you ever think, farmer friend, that you have done much to bring about this condition of affairs?

Now, how out? Is not the reply too plain? Educate the boys of the farm home. True, some of them have been so trained in farm activities that books have for them no attraction. Many of the boys have been kept at home to do chores and do farm work until the boys of their age who have been kept constantly in school and nearly all the girls of the community are in grades far beyond which the boy kept at home will be able to enter. He then becomes sensitive and concludes he doesn't want to go to school. Parents apologize by saying, "Our boys never did take to their books as the girls did."

Now is the time to prepare to keep the boys in school during the entire term. If the home training has been what it should and the hired man is an impossibility, by a right management the boys can be kept at night and morning in such a manner that will not interfere with study. There is no neglect that children will so bitterly hold against a parent as that of depriving them of school advantages.

There are on many farms much autumn work that could be pushed in late summer, so that the burden need not come after school begins. And if the boy is really in earnest about his school work he will begin with a will, if he understands that his effort will enable him to attend the academy—a privilege he has so long coveted, he will not hesitate in the evening to do a school suit and don overalls, blouse and straw hat and do chores.

We do speak in behalf of the earnest farm boy desiring an education, which parents may think can be secured a few years later when the farm is more prosperous. Then it is off too late and the boy plods along old, beaten tracks. Talk this matter over with the boys and make plans that will be of advantage to parents and the boys.

It is said that milk retailers and farmers in Boston have decided to substitute wine measure for beer measure.

**SPECIAL OFFER.**

While the regular subscription price for the RURAL WORLD will remain at one dollar per year, yet, in order to more than double our present circulation for the year 1900 we have determined for a brief period to allow all of our present subscribers to renew their subscriptions by sending the name of a NEW subscriber with their own for one dollar—thus getting two papers for one year for only one dollar. In all cases, however, the additional name or names must be new subscribers. Renewals will not be received at fifty cents, except when accompanied by a new subscriber. Two NEW subscribers at the same time, however, will be received for one year for one dollar. New subscribers can also send additional new subscribers on the same terms. This is below the actual cost of the paper. But so anxious are we to have the RURAL WORLD enter tens of thousands of new homes that we are willing to make this low offer. We know the RURAL WORLD is doing a grand work in uplifting the farmer, and we are more than anxious that its benefits shall be extended to the widest limits, hence this special offer. We hope to have 100,000 subscribers on our list for 1900.

**HAS THE STATE DONE ITS DUTY**  
To the Dairy Industry?

A letter on page two of this issue, addressed to the secretary of the Missouri Dairy Association, calls the attention of dairymen of the state to the fact that if they wish to make exhibits of dairy products at the Pan-American Exposition to be held at Buffalo in 1901 action should be had soon in order to secure space. As stated by Mr. Converse, a State Commissioner has been appointed by Governor Stephens to arrange for a state exhibit. We are not informed as to what, if any, action has been taken in the direction of a dairy exhibit.

As far as it is dependent on quantity and quality of dairy products, Missouri could make a most creditable dairy exhibit at Buffalo, as she could have done at other exhibitions; but the fact that there is a dairy industry of sufficient magnitude in this state to be worthy of recognition seems scarcely to be known by the powers that be.

Going to the shipment figures put out by the State Labor Bureau, as being the most available for comparison, we find that the state is credited with having shipped during 1899 \$384,000 worth of butter of all kinds and \$768,000 worth of cheese and milk. Compared with the fact that a total of several million dollars worth of dairy products produced annually in Missouri.

But what has been the policy of the state in reference to these two industries—fruit-raising and dairying? For many years the State Legislature has made regular appropriations of from \$4,000 to \$8,000 to the State Horticultural Society for use in developing the fruit raising resources of the state, the only line of agriculture so recognized by the state. Throughout the history of the Missouri Agricultural College and Experiment Station far more attention has been given by those institutions to horticulture than to any other special line of agriculture, and on top of all this, the State Legislature at the last session established a Missouri Fruit Experiment Station in South Missouri. What has resulted from all of this effort to develop the fruit growing industry of the state? One result will be seen by turning to page three of this issue and reading the communication of Acting Pomologist Wm. Taylor, under the head of United States Fruits at Paris. By this and letters published in former issues it is revealed that Missouri fruits are winning the highest honors at the World's Exposition now being held at Paris. And this is by no means the first time that Missouri fruits have won first prizes in competition with the world—she has been doing this for years, thanks to the good work done by the State Horticultural Society, and her fame as a great fruit-producing state long since became world wide. The assistance that has been given by the State to the Horticultural Society has been to that extent wise, and the effort that has been made by the College and Station workers to foster and develop fruit growing has been productive of much good. But why has the state limited its assistance to fruit raising among the agricultural specialties? Is the state so inconspicuously a fruit raising rather than a dairy state that it was not worth while to do anything to encourage the development of the dairy industry? If that be the position taken, a glance at the Labor Bureau's shipment figures quoted above will demonstrate its falsity. With all the

money and effort expended in developing and encouraging the fruit growing industry, the value of the last year's shipments of fruits is not \$100,000 more than the value of the shipments of dairy products for the same period.

The single point we wish to make is simply this: If it has paid the state to aid in developing Missouri's fruit growing industry, and no one who knows the fact will deny this, does it not seem clear that with anything like the same assistance given to the dairy industry that Missouri would have been famed as a dairy state, and would have been creditably represented as such at Chicago, Omaha and other like occasions of the past, at Paris, where the State of Georgia is now winning laurels on her butter exhibit, and would be next year at Buffalo, and in 1903 at the World's Fair to be held within her own borders?

**FARM FACTS AND THOUGHTS.**

**EDITOR RURAL WORLD:** I register it here and now that there are more weeds in the corn this year in Tipton Co., Ind., than there have been for a number of years. This is a fact. The reason for it is twofold—the largeness of the crop and the wetness of the season. It seems this summer in this section every time it rains it gives us our share. While there are parts of Indiana that are in need of rain, we do not here. We had a good shower Sunday last. This is Friday morning before daylight and it is raining a little now.

One can see that he would have been better off with less ground to keep clean this year. We think we will not make the same mistake again. Even if the fly does take the wheat, or if from any reason our regular rotation is broken in upon, we shall sow some of the many spring crops for pasture or grain, and thus keep the hoed crops within the safety limit.

I do not object to hard work sometimes, or to working hard some of each day, but to hoeing weeds from morn till night from week to week, one such experience is enough.

Potatoes and tomatoes do not ripen as they should. While there are some of the weather, if there is a better early potato than the early Michigan or early Ohio, we have not found it out.

Oats are an abundant crop in this section this year, yielding at the rate of about 60 bushels per acre where the farmer succeeded in saving them all. The wind and rains caused them to get down so badly most of them were cut one way. Some few fields were mowed. This took much extra time, and coupled with the fact that every two or three days, it rained, we can readily see that the business of saving oats this year was no child's play.

A day off at this time of year rests one wonderfully and enables him to take hold with renewed energy; says an exchange, "A day off will make your life longer, not shorter."

A. N. SPRINGER.  
Hamilton Co., Ind.

**THAT UNSETTLED MAN.**

**EDITOR RURAL WORLD:** In reply to an "Unsettled Man" of Taylor Co., Ky., I would like to say a word for Montgomery Co., Ill. This is the county that has produced the finest apples in the world. They were grown within four miles of Hillsboro, the county seat, by Hon. W. A. Young, who sent to the Paris Exposition a selection of 500 Ben Davis apples, 500 Winesaps, 500 Minors, 500 Smith's Ciders, and 400 Hawley's Jannets. The apples from Illinois were marked 18 on a possible score of 20, while Missouri, New York and Nebraska apples scored 16, or two points below our Illinois apples.

This county is also well adapted for general farming and stock raising. Land can be had in prices ranging from \$20 to \$50 or \$60 per acre for improved farms, according to location. If a man really tries he need not starve here. He can get a home on easy terms, if he can make a reasonable payment to start with, and only have to pay 5 or 6 per cent interest on deferred payments. School advantages are of the best that can be found. Churches are plentiful.

Oats and potatoes are good crops and corn promises to be good.

G. W. RAINEY.  
Montgomery Co., Ill.

**EDITOR RURAL WORLD:** If an "Unsettled Man" of Taylor Co., Ky., would come to Rogers, Benton Co., Ark., he would find good schools, good water and an abundance of good fruit. The country schools are excellent. Rogers is a live little town, situated on the Frisco Railroad. Apples, peaches, cherries and all kinds of small fruits do well here. We have a majority of God-fearing, law-abiding people. Church privileges are good. Rogers has an ice factory, a large lime kiln is close by, also fine electric springs, good market for chickens and eggs. This is a healthy country, also one where a man can wear patched clothes and not be thought any less of for so doing. If an "unsettled man" will send me a self-addressed, post-paid envelope, through the RURAL WORLD, I will try to give him all the information I can.

Benton Co., Ark. A SUBSCRIBER.

**PETTIS CO., CENTRAL MO.—W. D.** Wade reports a late rain in the neighborhood, but too late to do the corn much good. It has put the ground in good condition for plowing.

**SORGHUM MACHINERY.**

**EDITOR RURAL WORLD:** Having decided to engage in the manufacture of sorghum syrup, the selection of proper machinery is of prime importance.

I write for the smaller manufacturers, for if one is to engage in the business on a large scale, he will employ experts to select his machinery, and consider every part of the different operations, of course.

THE PRESS should be of some standard make; and if your neighbor has one that he has proved and knows it to be good, you can safely get one like it, provided it is made near by. All else being equal, get your press as near home as possible, not only to encourage the nearest neighbor, but because in case of an accident you can get a broken part more quickly, and at less expense.

For a plant to manufacture 100 gallons or less per day, get a two-horse press, one that will press out about 3 gallons of juice per hour. For a press of this size, a vertical style will probably be cheaper, and on the whole, more satisfactory than a horizontal. Get no press that has not facilities for oiling the lower ends of roller bearings; and use nothing but best castor oil on your press.

Be sure the sweep is very large and strong, for if not, it will spring and cause press to run unsteady. Go to the woods and cut a small tree with the proper natural crook, and hew it down on top or bottom, leaving it flat, or nearly so, about 36 inches at the tip and gradually getting larger as it nears the press. Set the press very firmly, bracing in the most thorough manner; and see that the sweep is bolted securely. If you have a vertical press, feed always at the top, and you will never clog and strain your press.

THE EVAPORATOR is only of secondary importance to the press, for a plant the size under consideration I would never use copper. Galvanized iron is good enough, and is so much less expensive. Remember copper will make no better syrup, the only advantage being it is more durable.

For a power local dealer in hardware, and let him get you a single sheet of medium weight, galvanized iron about 42 by 72 inches. He will not have it in stock, as this would be a special size. Do not let him look, rivet, or solder two sheets together to save a trouble of sending for a single sheet; the proper size, unless you can get one much cheaper locked or riveted than in single sheet, to use for the heater, at \$1. For the evaporator insist upon the single sheet; for the whole bottom should be perfectly smooth and free from seam. Experience (the best teacher) will emphasize this very much more forcibly than I can do. If to get proper width you are obliged to get a sheet longer than 72 inches, cut it to proper length. About the inches from one side and one end of the sheet, at either corner if box or pref; have your tinners insert an outlet about two inches in diameter. Have him make the outlet thimble very true and smooth and slit the top end every one-fourth inch, turning the slits outward, and for the thimble in place rivet the slits to the sheet, so as to hold it firmly in place. Then solder tightly to make it so that, not to hold it in place, if no solder will hold it, use a good solder, and make an elbow that will cover outside of thimble the long end ending out a foot or so to draw the syrup off into the tub. Now you have the form of your evaporator. Then take a 2x3 soft pine and make a box the 2 of the bottom. Make this box square flaring as you choose. Nail the corners securely, and turn it bottom up, as put the bottom in place, having a lip support at either corner of box or inside, so the bottom will be perfectly smooth and level. Then nail the bottom place with lat nails, being careful, of course, not to let any of the nails run in on the inside.

If it leaks a little the it day don't worry, for if you have done reasonably fair job, it will not leak long. If you burn out an end, be you learn how to set it, so the end will not burn out, fit in a new end piece as size as old one, and go ahead again.

THE ARCH—Build your arch so it will set under sides of the evaporator about eight inches, leaving a coddle at each side so steam will settle, it may be easily run over with the sizer.

THE HEATER should be about the same size as the evaporator and as said before, may be of two pl riveted together, if cheaper. After have used your evaporator two or three seasons, move it back for heater, make a new and better evaporator, as experience will then enable you to do.

Set heater with the sides ending over the arch, the same as the evaporator, and let the front end extend back end of evaporator so the juice will run into evaporator without dripping.

THE INSTANT the raws begins to boil in center of heater, it to remove the heavy green scum, remove it all as rapidly as possible. If leave it to boil in, it is your own fault that your syrup is ruined. As soon the second green scum settles at the heater, remove it, and the beautiful clear juice is ready to draw into evaporator; whenever you are ready for it. Practically no vegetable matter will remain in juice now, if thoroughly treated, the mineral

matter in solution can only be removed by the aid of chemicals and the employment of processes with which we little fellows have no business to concern ourselves.

With the evaporator above described, I will undertake to make a grade of sorghum syrup that for clearness, uniformity and flavor, as well as superior body, and never a "burn up," that cannot be approached by that made on any other machine in existence.

THE SKIMMER is important. Let it be about the size of an ordinary dust pan, with a bottom of finely perforated tin, all parts riveted. Let the thimble at back side be large enough so you can insert an old broom handle, and you are fully equipped for the coming battle royal.

Shelbina, Mo. SHELBY.

**PEBBLES FROM THE POTOMAC.**

**EDITOR RURAL WORLD:** A special from Charlottesville, Va., says: "The horticultural society has captured first prize for its exhibit at the Paris Exposition. The information was sent to Samuel B. Woods, of this city, president of the society, by Mr. William A. Taylor, who has the Paris exhibit in charge. In addition, the Virginia apples were included in the United States exhibit, which contained 40 varieties from 14 states, and which also captured the first prize in the international category. Speaking of the famous Albermarle Pippins, Mr. Taylor writes that they were in excellent condition in July, and were much admired both by the jury and by the dealers and consumers. The outlook is favorable for an increased demand for American apples."

**AN OUTING.**—Since our last letter to the RURAL WORLD we have visited the celebrated Chesapeake Bay. As the train sped over the landscape of the far-famed blue hills of Maryland, we became convinced that few states east of the Rockies could unfold scenes of rarer beauty. All along the route evidences of agricultural activity were manifest. The orchards were loaded with red-ripe peaches, and the crop and quality are up to the standard. The trees waving their leafy branches, fragrant flowers blooming everywhere; hillsides and valleys covered with luxuriant verdure, the air pure and balmy, and the orchards yielding their delicious fruits in abundance, painted a picture on our memory that will remain with us for many days.

**HOPEFUL SIGNS.**—"What I would consider one of the most hopeful signs of the times," said a prominent Western real estate man to a "Post" reporter a few days ago, "is the tendency of people with money to invest in buying farms. The trend has long been to desert the farm for less and less investment in industrial and mining stocks, until the demand for such became so great that the temptation to water them was hard to resist. With investments in farming lands becoming popular there will be an appreciation in country real estate values. The result will be smaller farms and closer cultivation. With scientific farming 100 acres will yield as large a profit as 200 acres will when cultivated unscientifically, and the supply of foodstuffs will be greater."

**BALANCING THE BOOKS.**—A recent and instructive article from the pen of Mr. C. D. Lyon, of Ohio, treating on the subject as to whether farmers put a proper estimate on all the privileges they have, is worthy of careful consideration. The tendency these days of many young people on the farms is to rush to the city, where, apparently, money is more plentiful and the hours of labor shorter. We are inclined to the opinion that this idea is erroneous. Take, for example, an energetic young man who arrives in one of the great cities with no particular qualifications for any special position and secures a position as a street car conductor at \$2 per day. Years come and go, and the conductor eventually is regarded too old to properly perform his duties, compelling him to give way to a younger man. During these years of incessant hardships the conductor has indeed done well, with his numerous enforced vacations, if he has been able to keep out of debt. The corporation has become immensely wealthy, but notwithstanding that his friend's interests he has no roof to cover his head. It is reasonable to presume that with an equal amount of energy, strict application to details, this same man could have acquired in a similar number of years a farm that would have supported himself and family in comfort, and afforded him ample opportunities for recreation and amusement. On the farm he could have reaped the golden harvest of success; in town, alas! too often the field yields only thistles and discontent. In a recent interview with the Honorable Secretary of Agriculture he is quoted as saying: "I love the work of the Agricultural Department. It is the only thing that can keep me in Washington for any length of time. I would not care to stay here for work that would be less congenial. The best place in the world that I know of is my Tama (Iowa) County farm. I have several hundred acres of woodland pasture, and I am going there to dander through the timber and look at the herds. That is where my real life lies." And yet there are those who think that the fountain of pleasure is to be found only in towns, where the tolling, crushing, strug-

gling crowds of humanity congregate. It would be an easier task to again perform the twelve labors of Hercules than to find contentment in this condition. An eminent historian commenting on the many glorious achievements of General Washington refers to his life on the beautiful estate at Mount Vernon by saying: "He beat his spear into a pruning hook, and planted choice trees, and reared rare breeds of animals with the same conscientious energy with which he had ruled armies and governed cabinets." Imagine Washington rushing to a crowded city, from pure choice, leaving the invigorating atmosphere of the Virginia forest, to mingle with his fellow countrymen in a mad rush for money to buy pleasure! John Ruskin says that "when men are rightfully occupied their amusement grows out of their work as the color petals out of a fruitful flower. Truly the life of the agriculturist is the ideal occupation. Like Mr. Lyon, we believe that when the farmer balances his books at the end of the year he will find that he has been fairly rewarded for his labors."

S. F. GILLESPIE.  
Washington, D. C.

**SUMMER DAYS AT SEVEN PINES.**

**EDITOR RURAL WORLD:** I am glad that our county is to have a farmers' institute held by the State Board of Agriculture, as these meetings help farmers to get together and talk over social and industrial affairs. These meetings are pronounced agricultural assemblies, and for the promotion of the high profession. Our county farmers have so fallen into disrepute as to bring reproach upon the very name of farming. The average county fair is an empty exhibit, for the development of gambling on horse races and for all kinds of tricks and lileentious side affairs. I rejoice that the State Board is to be with us, and I wish that some member would give a good talk on the importance of farmers taking one or more of the papers which are published in their interests. Why, as I go about the country and talk to farmers, I am astonished at the lack of interest they have in the subject of agriculture. The majority of homes in the country are without the farmers' paper.

**THE CANNERY.**—Our large and well equipped cannery establishment in Alexandria began work on Thursday, August 2. This enterprise is the best in all this region, and will be a very valuable part of our business concerns. The company is well pleased with the location and adjoining lands, and are especially well suited in the assurance that ample help in the way of labor is certain, as the establishment is handy to two large labor towns.

**WEATHER NOTES.**—In our county this summer the rainfall has been mainly local, pretty generally distributed. June gave us an average of one inch and a half and July about two inches. This makes a great deficiency in the normal record, and it doesn't require much weather wisdom to venture a judgment that old earth is dry. Good showers have saved the corn, and there will be a fair crop. Cool days also aided in preventing a rapid evaporation. August 2 to 7, inclusive, had every day a straight pressure of 30 to 37 degrees. This is getting up near the point of stifling.

**A TRIP THROUGH N. E. MO.**—I have lately taken a couple weeks' journey through our county and over into Knox. Crops in general appear pretty good, and farmers are in good spirits. I noticed many of them are stocking up with a variety of new machinery, which is an indication that they are enjoying a degree of prosperity. Good implements which are really needed are a great blessing indeed, yet I fear there is a tendency to go too deeply into the agricultural warehouse. I have ventured to remark to some of my friends, that the buying of farm machinery has taken on a pronounced form of dissipation. This is a pretty severe indictment, but I feel qualified to make it.

**WHERE IS THAT BACON?**—Let's see, what Illinois farmer was it who offered to send me a "chunk" of his fine, sweet bacon, to prove that farmers can have their own meat as good and tophome as Hammond, or Swift, or Armour? That chunk would be in order at Seven Pines just now. In my two weeks' trip among farmers chiefly, I found some good, sweet bacon, but the majority rather inclined to be strong.

**THE WOOLLY APHIS** has worked great damage to the pickle fields of our county, especially on low lands. The loss will be great. The pickle industry is an important branch of agriculture here in Northeast Missouri.

**STOCKING UP.**—I observe that farmers are stocking up in the line of horses and mules. On one pasture I counted 14 yearling mules. There are such laws as supply and demand. A poor man especially finds this true when he loses one horse of his only team.

Clark Co., Mo. JASPER BLINES.

**RALLS CO., N. W. MO.**—Threshing is all done and some farmers are plowing for wheat. Early corn will make a fair crop, but is damaged some by the dry and hot weather. There has been very little rain this summer. The spring was also very dry. Late corn will not make anything unless it rains soon. C. E. KEARNEY.  
Aug. 6.

**THE WHEAT CROP.**

**EDITOR RURAL WORLD:** Let me emphasize all that others have written on the subject of thorough pulverization of the soil. I am not one of those men who think that it is imperative to break wheat land in July, for I have grown several good crops on land plowed as late as Sept. 10, and seeded about Oct. 1. Four years ago I turned under a crop of ragweed as high as a horse's back during the last half of August, the seeding was done Oct. 1 to 5, and from 10 acres, drill measure, I had 27 bushels of wheat. In spite of the jeers of neighbors, I harrowed each half day's work regularly at noon and at night. A heavy rain came about Sept. 15 and packed the surface hard, the field was lightly disked, rolled and harrowed, then harrowed and dragged just ahead of the drill; a good rain fell just as we finished and we put the drill away. This field was wheat stubble, the same field I have to put in wheat after corn and tobacco this fall, and is not by any means the best wheat land on the farm.

We are breaking no fallow for wheat this season, but have three acres broken where I want to sow a small meadow.

This land was thoroughly cut over with the disk harrow before plowing; and the plow ran so easy on the team and did such a fine job that were I breaking for wheat I would certainly disk the land first, for the time spent in disking will more than be gained in plowing, to say nothing of the thorough breaking up of the soil through the entire depth plowed. In 1890 I broke a three-acre clover field for tobacco after the clover was nearly in bloom. My plants failed and the land lay idle. About Aug. 15 I plowed it again, turning under about the heaviest crop of weeds I ever saw. The next spring the plot was broken up in May and grew a fine crop of tobacco. Oct. 12 it was broadcasted in wheat at the rate of one bushel per acre after the tobacco stubble had been harrowed across the rows. The harrow was then run over it—in a hurry, as a heavy rain was coming—and it gave me in the 1893 harvest 4½ bushels of wheat, machine measure, per acre.

This is the best yield of wheat I have ever known of in this part of the country, and was, no doubt, due in a great measure to the three plowings of the land and the subsequent thorough cultivation of the tobacco crop.

When tobacco was grown by the old ridging system, and the ridges stirred down with a deep going cultivator before seeding, there was often a short crop or a failure.

If all farmers could, or would, establish permanent pastures and abandon the ruinous rotation system, regardless of failure of grass and clover seeding, then they could grow wheat crops that would pay year by year. I simply mean that, if part of the clover seeding failed that part could be broken up in August and sowed to wheat without causing any inconvenience in the matter of pasture.

The farmer could, and would break his land in season, prepare it properly, fertilize it well and grow better crops of wheat.

The sheet anchor of wheat growing is a compact and thoroughly pulverized seed bed, the entire depth of plowing fined and compacted by repeated cultivation and the top inch and a half as fine and mellow as a garden bed.

Then with moderately thin seeding, the plants may have room to tiller or stool, with fairly fertile soil and a judicious application of manures or fertilizer, we seldom need fear a failure of the wheat crop.

Ohio. C. D. LYON.

**A PRIME SYRUP.**

**EDITOR RURAL WORLD:** Pure sorghum syrup can't always be made, but if the cane is not mixed with broom corn and is pure, and was grown on clay or light soil or sandy loam, then with a quick boll and persistent skimming one experienced in stirring may expect good syrup.

If you wish to make a syrup fit for a king, use the following recipe: For this purpose a common pan is best, or one made the shape of a half moon. Put on about 50 gallons of cane juice and boil as quickly as possible until reduced to about 15 gallons. Then add one gallon of clear corn syrup or golden drip. Boil until real thick. Draw off and cool quickly.

I do not think that clay, lime or soda, as recommended by some, is of any benefit to sorghum, but rather injure its keeping quality.

H. E. SPONSILER.  
Green Co., Ill.

**GOOD TIMES IN ARKANSAS.**—We had a very favorable spring and so far the summer has been all one could wish to enjoy. Crops of all kinds are fine; everybody is busy, prosperous and happy. In this country we have mild winters and pleasant summers. In the winter the cold is tempered by the warm Gulf winds, and in the summer the heat is reduced by the health-giving salt breezes from the Gulf. Numerous improvements and new enterprises are being made and begun in our country. The price of general labor has advanced nearly one-third—help of all kinds being hard to get. J. C. BERRY.  
South Franklin Co., Ark.



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## Horticulture.

### HORTICULTURAL TALKS.

**DRAP D'OR APPLE.**—Before me on the table lie two of these apples, just from the orchard, each measuring almost a foot in circumference; the form the same as the yellow Bellflower and about the same in color. The apple is just now coming in and is one that should be more generally planted than it is. The tree is a good bearer and the quality is not surpassed by any other apple of its season. It is slightly sub-acid, juicy and tender in flesh.

**ANOTHER HYBRID PECAN.**—I have just received from M. L. Bonham, Clinton, Henry Co., Mo., nuts from a tree found in the woods near there. It resembles the Nussbaumer considerably. We opened one and it was a mere film of shell through the middle. This is the fourth sample of this kind of a cross sent me, and in my opinion opens a new field for experimenting. Why not cross some of our largest pecans, hardy here in the north, with our largest hickory nuts, and vice versa? What a great thing might be developed. These nuts sent me from Clinton average 1 1/2 inches long, 1 inch broad and 1/2 inch thick. I can hardly tell what such a tree would be valued at if it were on my grounds. My Nussbaumer tree is 4 1/2 inches in diameter at the base and 25 feet high, but has not borne any nuts yet. It was grafted on a young hickory about four feet from the ground.

I am too old to undertake the artificial crossing of these nuts, but hope some younger man will. It is a thing that can happen in the forest in the natural way. It can certainly be accomplished by the hand of man also.

**THINNING OUT PEARS.**—When looking at my Garber pear trees (I have but a few), I found them entirely too full. Where they were about properly set they are much larger than when crowded. They were thinned so that when full grown they will not touch each other. They can be grown to average nearly half pound apiece. Then they are a royal looking fruit. There is a quince flavor about this pear that is quite a treat to us, as we cannot grow this latter fruit. My Sheldons were never finer. The trees have but a slim crop, hence their superiority. My Dewey pear tree has a nice crop and the fruit promises to be larger than heretofore. A pear, just as good in every respect as the Bechtel of which it is a seedling, and considerably larger, may be worth having. It is not likely to come out with flying colors, as no nurseryman has had hold of it. It will be distributed by scions for budding or grafting, and no dollar or two dollars a tree demanded for it.

**CHERRIES.**—I notice in an article in a horticultural paper that a contributor says: "The common Morello is perhaps the best stock on which to work the better varieties." This will suit me for there are scores of suckers coming up where the storm broke the tree down. These I can bud, and may get some cherries to eat. A good mass of choice cherries I have not had in five years. My old Napoleon is about dying. Well, it has done its duty and is perhaps the largest cherry tree in the country. It is about 20 inches in diameter at the base.

**THINNING OUT PEACHES.**—The trees were in many cases entirely too full and had to be thinned. Old trees that I considered about worn out are loaded, sometimes four and five in a bunch. No two were allowed to touch each other. The larger varieties should be five or six inches apart. It is tedious work, but less done where too full the fruit will not be fit to sell. In coming to a tree that had been partly thinned a week previous, the difference in the thinned part and the other was quite perceptible. So that even when nearly ripe it is well to thin them.

The famous Elberta is disappointing me. Among all my varieties, and I have at least 20, the Elberta has the smallest crop. This has been the case for three years now. The trees are vigorous and healthy. Am I too far north for this peach? That it is not of the best quality here can be judged by the complaint paid it by one of my customers in a little town near here. I sent him some splendid Elbertas and thought they would just please him. A few days afterwards one of my sons took some Susquehanna to him, which pleased him greatly. After eating some he said to my son: "Tell the old man that those big peaches he sent me the other day weren't worth a —." That took the wind out of my Elberta's sails. That was two years ago; perhaps they will be better this year. But to refer to the Susquehanna, I will say that in all respects, but not a very regular bearer. It is quite handsome and, in my estimation, better in quality.

Thinning peaches will make many salable, when if all were left on, but un-salable, and would ship shipping expenses. One good, large peach is worth more than a half dozen small, tasteless ones. Then again it is a relief to the tree, as each peach, when bearing the seed equally takes the vitality of the tree.

My apple crop is not nearly an average one, yet some trees will have to be thinned if we want good fruit.

SAMUEL MILLER.

Bluffton, Mo.

IOWA NOTES.

**Russian Mulberries as Bird Savers.** Editor RURAL WORLD: This closing year of the nineteenth century is to be one of unbounded plenty in Iowa. The wheat is heavy in yield and as to quality, excellent. Oats better than ever, a average crop and corn never promised better at the present stage than now. Gardens and melon patches are as good as ever grown here.

For years our apples have been almost worthless on account of the worms, but this year so far there is not one worm where there have been fifty for any year of the last six. What has caused this scarcity of worms we do not know.

Peach trees are making a very heavy growth and are loaded with fruit.

Judge Miller complains again of the birds taking his cherries and berries. I am glad that he says he will not shoot them. As a remedy for birds taking the fruit, ten years ago, in the RURAL WORLD and in the Missouri State Horticultural Society report for 1891, I prescribed the Russian mulberry. Another ten years' experience and observation has shown that it is almost a complete remedy. Sixteen or seventeen years ago, N. F. Murray's nursery, several hundred Russian mulberries bore their first fruit. While the mulberries were ripe the birds

seemed to like them better than anything else. I marked some of those trees for the season and for the quality of their fruit, and the next spring moved seven or eight of them to my own place, and for at least ten years their fruit has been protecting the berries on the place.

**RUSSIAN MULBERRIES** are, of course, seedlings. There are varieties early and varieties late; they may be found bearing in time to save cherries or late enough to save the berries. There are trees that bear mulberries of many sizes, some of them quite sweet and all very much liked by the birds. They can be propagated by grafting or by budding. The trees are entirely hardy. They grow quickly and bear early, and their crop seems never to fail. They do not grow to large trees and need not take up much room. They make a good shelter belt and the wood is not without value.

The Russian mulberry may be made one of the important helps to save our birds from the extinction that threatens them. The Audubon Society, our Agricultural Department, the writers and the papers, would do well to learn the value there is in this idea and to put the facts before the whole country.

Who, how many, will take up the work of selecting and propagating them and putting them within reach of the fruit growers? Just that should be done all over the United States.

**PLANT MULBERRIES. DON'T KILL THE BIRDS.** W. R. LAUGHLIN.

Page Co., Ia., August 5.

WHAT WILL THE APPLE CROP BE?

Editor RURAL WORLD: Last spring it was generally said that there would be an enormous crop of all kinds of fruit, but as each crop has become ready for market the demand has been good and good prices have been secured.

**THE BLACKBERRY CROP** and market were a surprise in both yield and price. I sold continuously from June 15 until August 2, and the demand seemed to increase, and the fruit brought good returns when shipped.

**APPLES.**—Now the cry is that there is the biggest apple crop in sight that this country ever had. Our state has been back of the trees a year ago last winter. From what I have seen and from our state crop report I very much doubt whether there will be more than one-fourth of a full crop, and one-half of that will not be marketable. Some varieties are almost worthless.

**THE PEACH CROP** just now coming in is going to be very much less than expected, owing to insects and the cutting back of the trees a year ago last winter; also because of the great prevalence of peach yellows. There are but a few people who seem to know what this disease is. I very much doubt whether there is any locality where peaches are grown that has not more or less of it.

It is easily controlled when taken in time, but if neglected is sure death to the tree and the fruit is worthless for shipping.

L. V. DIX.

Cole County, Mo., August 6, 1900.

UNITED STATES FRUITS AT PARIS.

Editor RURAL WORLD: I take pleasure in enclosing herewith a list of awards to exhibitors from the United States at the Paris Exposition in the temporary competition in horticulture held July 13. Exhibitors of the crop of the present year are now being forwarded at regular intervals for future competitions. The competitions yet to be held occur on the following dates: Aug. 23, Sept. 12, Sept. 26, Oct. 10 and Oct. 24. Exhibits destined for any of these competitions must leave New York by steamer two weeks in advance of the date mentioned.

W. B. TAYLOR.

Acting Pomologist.

Washington, D. C., Aug. 8.

Awards to United States exhibitors in Group VIII.—Horticulture, at Paris Exposition. Temporary competition, July 13, 1900. Class 45.—Fruits and fruit trees:

First prizes—Collections of apples, crop of 1899; Division of Pomology, U. S. Dept. of Agriculture; general collection of United States Horticultural Society; Missouri State Horticultural Society; New York State Commission; H. A. Aldrich, Neoga, Illinois; F. A. Young, Butler, Illinois; Collection of citrus fruits: California State Commission.

Second prizes—Collections of apples, crop of 1899;

Connecticut Pomological Society;

North Carolina Dept. of Agriculture;

Third prizes—Collections of apples, crop of 1899;

James Dickie, Massies Hills, Va.;

J. O. Parker, Lakin, Kansas;

L. B. Perrine, Blue Lakes, Idaho.

WORK FOR THE VEGETABLE GROWER.

**PEAS.**—Plant peas now for fall use, and successions up to the 20th of August for this section. To raise a good crop of peas at this time of the year is not always an easy matter. If they are not sown within the next two or three weeks they will be too late, and very often at this time we have a period of dry weather extending over several weeks, during which the seeds will not germinate without special attention.

The best crops of fall peas we know of were grown on the system much in vogue in the British Islands, namely that of sunken trenches. These trenches are opened with a spade, or plow, to a depth of 10 inches, and two or three inches of manure put in the bottom, covering this with a like depth of soil. If the ground is dry it is given a good watering and allowed to stand for a few hours before sowing and if the weather continues dry and unfavorable water is freely applied. This, with frequent cultivation, and the drawing of the soil up to the plants as they progress, will induce a strong growth and a crop of peas of good quality.

Fall peas, to be really satisfactory, must get a good start and be encouraged to make a strong growth. We have found the first early round varieties to be the most satisfactory at this time, and next to them the dwarf sorts of marrows, like Nott's Excelior.

**MELONS.**—Crops of melons should now be making satisfactory progress. The swelling of the fruit will be greatly assisted by waterings in dry weather and by cultivating all vacant space between the plants. The branches or shoots should not be pulled about or disturbed during the operation, but the hand should carefully worked between them whenever possible. Systematic dustings of lime, mixed with a little Paris green, should be given to ward off the fly and grub. It would be well to discontinue the Paris green when the fruits are half grown.

**MUSHROOMS.**—With many who grow mushrooms it will now be necessary to begin collecting manure. Where it is possible to make the beds with fresh manure, or manure only a few days old, it is to be much preferred, as in that state it contains a large amount of ammonia, which is such an important factor in the production of heavy crops of good quality. But where the manure of only a couple of horses is available it may take two or three weeks to collect sufficient to make a bed. Put it as gathered in a shady place (as shed if possible) where it will be protected from the sun and rain. The manure should be spread out thinly to prevent it from heating, which is the cause of the trouble; Ben Davis, 100; Missouri Pippin, 50; Jonathan, 40; Gano, 15; York Imperial, 15. Their trees are set, when two years old, in trenches instead of holes, 15 feet apart in rows north and south, and the rows 22 feet apart. There are three main reasons for adopting this plan: (1) With the trees so close together they form their own wind-break, making hedges or belts of timber unnecessary; (2) The shade makes the evaporation of moisture from the soil less rapid, and the danger from sun-scorch of the trunks and branches less imminent; (3) It is easier to secure a good permanent stand by close planting, and the excess of trees, if there is any, can be removed as may be desirable.

From their long experience in commercial orcharding the Messrs. Wellhouse are making their trial plantings in about the following ratio as to varieties: Ben Davis, 100; Missouri Pippin, 50; Jonathan, 40; Gano, 15; York Imperial, 15. Their trees are set, when two years old, in trenches instead of holes, 15 feet apart in rows north and south, and the rows 22 feet apart. There are three main reasons for adopting this plan: (1) With the trees so close together they form their own wind-break, making hedges or belts of timber unnecessary; (2) The shade makes the evaporation of moisture from the soil less rapid, and the danger from sun-scorch of the trunks and branches less imminent; (3) It is easier to secure a good permanent stand by close planting, and the excess of trees, if there is any, can be removed as may be desirable.

AGRICULTURAL EDUCATION IN THE PUBLIC SCHOOLS.

The progress that is being made in Missouri to introduce "nature studies," or agricultural education into the public schools of the state is attracting widespread attention. "American Gardening" sprang from the *Annals of the Bulletin* of the following article by J. C. Whitton, Professor of Horticulture in the Missouri Agricultural College, in which is described the work done in the Columbia public schools with "nature studies." Prof. Whitton is largely responsible for what has been accomplished in these schools:

At the present time interest in introducing various forms of "nature studies" into the schools is becoming widespread. The successful methods of doing the work are of unusual interest to teachers.

Work done by the Columbia, Missouri, public schools, during the present year, is one of the best examples that has come to the writer's notice of how successful plant studies may be introduced. The work was mainly planned by Mr. Peter Potter, the teacher of natural science in the high school, and shows how successful an industrial teacher may facilitate into the minds of his students a love of plant study and plant culture.

The first step was window gardening in the biological laboratory of the high school. A plant box 8 inches wide, 6 inches high, and the length of the window sill, was placed at either window in the room. These boxes were filled with melon from root to top bud, and hence in the first pruning I endeavor to make the top most growth a leader. But many very successful growers train their trees to open heads from the first. Both systems are good if well cared for, and no system of pruning is good if it is not given continuous attention.

CHAS. A. KEEFER,

Tennessee Experiment Station.

SOME APPLE-GROWING IN KANSAS.

The story of success is always a pleasing one, instilling hope in the breast of the listener and stimulating him to greater endeavor. The man who scores a success in his particular line of legitimate undertaking contributes materially to the general prosperity of his community, and is a working element in the welfare of the world.

The development of that section of the United States so indefinitely characterized as "the West" has furnished many worthy examples of surmounting great obstacles, overcoming discouragements, and of the final triumph of the sturdy, persevering pioneer. Many are the examples related, showing the marvelous possibilities of the country when backed by level judgment and willing muscle.

One man's requirements often happily combining with another's ability work great advantage to both. Such a circumstance effected the beginning of the success of Fred Wellhouse, of Kansas, the most extensive commercial orchardist in the United States. He is widely known as the "apple king" of Kansas, and the story of his eminently successful career in orcharding should be an inspiration to all who read it. Something of it is related here by Mr. F. D. Coburn, secretary of the Kansas Board of Agriculture.

The year 1875 found Mr. Wellhouse without money, but with a definite knowledge of tree-growing and orcharding in Kansas acquired by years of close observation combined with practical experience, and full of faith in the possibilities of the state for fruit-growing. L. B. Wheat, a lawyer, of Leavenworth, owned three tracts of 47 acres of land which were not profitable. Mr. Wellhouse closed a contract with Wheat to plant this, 160 acres near Fairmount and 117 acres near Glenwood, in Leavenworth County, and 100 acres in Miami County, near Gardner, with apple trees. These lands had cost Mr. Wheat, with improvements about \$10,000 and could be rented for perhaps \$1 per acre. He furnished the land, fenced it (breaking that part of it not previously in cultivation), erected buildings for tenants, dug wells, etc.

Wellhouse & Son (the firm name) furnished the trees, planted, cultivated and took care of them until they came into bearing, getting all grain grown on uncultivated land between the trees, and paid taxes for the first five years. After that Mr. Wheat paid taxes and each party was to bear one-half of the expenses and each receive one-half of the income until Wellhouse & Son should receive 15 bushels per tree, or so long as the trees might bear. The Glenwood orchard was planted in the spring of 1876; the Miami County tract in 1877, with varieties as follows:

Glenwood tract (117 acres): Ben Davis, 80 acres; Winesap, 16 acres; Missouri Pippin, 4 acres.

Miami County tract (100 acres): Ben Davis, 50 acres; Missouri Pippin, 45 acres; Maiden's Blush, 5 acres; Cooper's Early, 5 acres; Winesap, 25 acres.

Fairmount tract (100 acres): Ben Davis, 50 acres; Jonathan, 40 acres; Cooper's Early, 8 acres; Maiden's Blush, 8 acres; Winesap, 24 acres.

The orchards. The account practically closed with the year 1886.

Wellhouse & Son now own 1,200 acres of younger orchards, located in Leavenworth and Oage Counties. About one-third of these are now laden with fruit and the product of this season is estimated at 20,000 bushels, approximately valued at \$5,000. Their largest crop was 80,000 bushels in 1890; the year's expenses amounted to \$12,000 and the gross receipts for apples \$52,000. The next year's crop was 62,000 bushels.

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shrubbery, under whose shade wild-wood flowers were thickly planted.

This work done, the enthusiasm for gardening was sufficiently great that it was thought best to induce the pupils to undertake independent work of this kind at their homes. Funds were raised and prizes offered to the various grades for the best vegetable garden, the best kept yard and the best natatorium planting, made and cared for during the season by the pupil himself. Judges were appointed to examine these gardens, pass upon their merits and award the prizes. Several hundred students entered this gardening contest, and the merit of the work as an instructive occupation for the pupils and as a means of beautifying the town is already apparent. Circulars were written, giving brief, simple directions for the various kinds of work. Copies of these were printed by the students themselves, at the high school, and distributed for the information of the contestants.

Separate prizes were offered for the colored schools, and here the work found its most enthusiastic followers. In no other part of the town has so much improvement been noted. Fences are being whitewashed, rubbish is being removed from the yards; walks have been laid out from the doorway to the gate; vines begin to cover the unsightly features about the place, and general improvement is noticeable.

DEATH IN MUSHROOMS.

Chicago, Ill., Aug. 4.—It was developed at the inquest upon the members of the Norris family, three of whom died yesterday at Harvey, Ill., supposedly from eating toadstools, that they were, in fact, poisoned by mushrooms, and not, by toadstools. It was shown that the family ate mushrooms of the finest quality, and not toadstools at all.

Dr. Martin, a mushroom expert, testified that in his opinion the poisoning was caused by a small black bug which he said he had found recently making its home in the top of mushrooms.

"I do not know, of course," he said, "that the Norris family was poisoned in this way, but they certainly ate mushrooms, and not toadstools. A while ago I found some of these bugs in mushrooms, and noticed that they exuded a fluid which surrounded them as they lay in the mushrooms. I placed the bugs and a portion of the mushrooms immediately surrounding them in a saucer of milk, fed the milk to a cat, and in two hours the cat was dead."

Mr. Martin showed several of the bugs, which he had taken from mushrooms. Several professional men, well versed in entomology, said they had heard of such a bug in South America, which makes its home in certain plants, and causes the death of any animal which eats the foliage. None of them had heard of the insect in this country. The physician in charge of the case testified that the family was poisoned "by eating mushrooms," and the verdict of the coroner's jury that "poison taken in with mushrooms caused death."

APPLE SHIPPERS ELECT OFFICERS.

Cleveland, O., Aug. 3.—The sixth annual meeting of the National Apple-Shippers' Association came to an end this evening, and most of the 100 delegates have departed for their homes. The next meeting will be held at Toronto, Ont., the first Wednesday of August, 1901.

The following officers were chosen: President, George T. Richardson, of Leavenworth, Kan.; vice-president, C. P. Rothwell, of East Palestine, O.; secretary, A. Warren Fitch, of Boston; treasurer, W. L. Wagoner, of Chicago. Executive committee: Walter Snyder, of Baltimore, Md.; chairman, L. K. Button, of Columbus, O.; C. O. Wiley, of Detroit, Mich.; E. M. Loomis, of New York, and B. Newhall, of Chicago.

During the three days the convention was in session letters and telegrams were received from every fruit-growing section of the country, and from these it is estimated that the apple crop this year will be the largest in the history of the United States, exceeding that of 1896, when 60,000,000 barrels were gathered.

**PEACHES FOR MARKET.**—Is there any peach ripening at same time as the Early Crawford, that is a large, yellow freestone, and is harder or better for market purposes? Which are the best three varieties of peaches to plant for the market purposes, for a succession, beginning with season of Early Crawford, and ending with, say, that of late Crawford, or a little later? My farm is on north side of Long-Island; soil a gravelly clay loam, and winters not severe. J. R. T. Greenlawn, N. Y. (There is no peach, so far as we know, which fully answers the requirements specified for season of Early Crawford. Foster will nearly do it; but it is a trifle dark-colored, and is not so productive in tree. It is, in fact, not a successful market variety, except with a few growers. Mary's Choice is a New Jersey variety of considerable merit, which with good culture, is very profitable. It is just a trifle later than Early Crawford. Of course, Elberta is to be included in the succession. It is probably the most popular market peach now in propagation in this country. For third in season, we would name Chair's Choice or Wheatland. We hardly know which to advise; some growers like one better; some prefer the other. In general, it seems to be true that Wheatland does better further north, while Chair's Choice has the advantage southward.)—Country Gentleman.

Trips to the woods to collect material for this garden suggested the desirability of home plantings on the part of some of the students. A section of this plant bench was filled with sand, which was carefully watered, and this served as a propagating bed. The pupils brought slips of geraniums, coleus and other house plants, which were inserted in the sand until they rooted, and then were taken home and planted about the house.

As warm weather approached, out-of-door gardening was begun. The ground about the school building was first graded where grading was necessary. When a trip to the woods was proposed after school or on a holiday, to collect wild vines and shrubs, the teacher had abundant enthusiastic followers, and horses and wagons were not at all difficult to secure. The native Virginia creeper was taken up and planted against the walls of the building, and trained over the doorways and in the blank spaces between the windows. Elder, red bud, spiraea, June berry, dogwood and other wild shrubs were planted in masses about the steps, in the angles of the building, as a means for enhancing the beauty of the grounds. The soil was spaded fine around each mass of

**FOR WORKING UP A CORN CROP**



Is an easy and profitable way, and the only one that will save the corn from the weeds and grass. This machine is fast, and does not knock off the corn. It is made and shaffs perfect man and horse. The machine is made of iron and is perfect. Requires little power and has large wheels. We make other machines. Write for our catalog. THE FOSB. MANFG. CO., Springfield, O.

**WHEAT, SEEDS, AMBER AND BEARDED.** CHAS. E. PRUNTY, MAIN AND MARKET STS., ST. LOUIS.

**SEED WHEAT**

Turkish Red Winter Wheat. The hardest and best variety of winter wheat in the world; has proven iron clad and invincible here in Iowa for the past twenty years, never yielding from 35 to 40 bushels per acre of the highest grade in the market. A most desirable one, and will increase the yield and improve the quality. All seed carefully selected, price \$1.25 per bushel, bags free aboard the cars here; 10 bushels \$11.00. Address: J. E. KATEKIN & Son, "Nelson Valley Seedmen," SHENANDOAH, IOWA.

**The Greatest of all Wheat Growers**

Is our DAISY FERTILIZER, and it is also the cheapest. A Natural Fertilizer and crop producer, giving best and surest field results. Field results are what farmers want. For Corn and Garden Truck our BROADAX BRAND has no equal. All in 100 lb. bags. Send for prices. ST. LOUIS SANITARY CO., St. Louis, Mo.

**CABBAGE WORM KILLED BY DUSTING HAMMOND SLUG SHOT**

over the plants. Its effectiveness is never denied; its safety is proved by 15 years of annual use. It is retained generally at 25 cents for 5 lb. packages. Put up in bags and barrels and SOLD BY SEED DEALERS. For pamphlet, address H. HAMMOND, Fishkill-on-Hudson, New York.

**WE WANT 10,000 CORN HUSKERS**

To send \$1.10 and get one of our outfits. It contains 12 pairs of 8-oz Canton Flannel Mittens, 1 four Combination Shucking Peg, 1 Leather Vint Band, and one pound can of Glue and Mitten Paint. Address: S. B. GALLBRAITH, Vermont, Illinois.

**A GREAT PEAR TREE.**—Quincy, Ill., boasts of the greatest pear tree in the West. It is located on the premises of Mr. Schraag, No. 924 State street. It is 25 years old and for twenty years has been bearing pears, the average weight of which for the twenty years has been one pound. These pears have never brought less than \$1 a bushel, and the yield has varied from eight to fifteen bushels. Last year the yield was twelve bushels. The prospects are good for another big yield this year, but as the pears are only half grown it is impossible to make an estimate at this time. The tree stands thirty-five feet high and the longest branches are fifteen feet in length.

**THE LARGEST TREE.**

The largest tree in the world is to be seen at Mascall, near the foot of Mount Etna, and is called "The Chestnut Tree of a Hundred Horses." Its name arose from the report that Queen Jean of Aragon, with her principal nobles took refuge from a violent storm under its branches. The trunk is 94 feet in circumference.—Am. Gard.

**SCIENTIFIC AND CORN HARVESTERS**

Is the best of the best. Write for circular and price. J. S. AINSWORTH, Des Moines, Iowa.

**FRUIT EVAPORATOR**

THE ZIMMERMAN. Different sizes and prices. Write for circular. THE ELMHURST IRON WORKS CO., Elmhurst, Ill.

Indicate, on the whole, a rather short crop. Michigan, parts of Illinois, Wisconsin, Minnesota and Colorado, report a good yield, but from many other states come adverse reports. Bee keepers who are so fortunate as to have honey to sell are advised to hold it at a good fair price, but sell whenever such is offered, especially in their home market.

HARRY LATHROP.

**TRAVEL-STAINED HONEY.**

A correspondent asks in the "Northwestern Agriculturist":

"What makes some comb honey look old and have yellow cappings, and is such honey just as good as that having white cappings?"

These are questions that are very often asked, says Mrs.



## Live Stock.

Aug. 21.—H. O. Minnis, Edinburg, Ill., Poland-China.

Sept. 4.—L. M. Monsees' Sons, Smithton, Mo. Mules, cattle and Poland-Chinas.

Sept. 2.—W. H. Lovelace, Bellflower, Ill., Poland-China.

Oct. 2.—A. M. Caldwell, New Holland, Ill., Poland-China.

Oct. 4.—W. H. Cooper, Pittsburg, Ill., Poland-China.

Oct. 4.—Martin Flynn, Shorthorns, Des Moines, Ia.

Oct. 5.—E. S. Donahy, Shorthorns, Newton, Ia.

Oct. 5.—Benjamin Bros., Brookfield, Mo., Poland-China.

Oct. 10.—T. C. Ponting & Sons, Moweaqua, Ill., Herefords.

Oct. 11.—T. C. Ponting & Sons, Moweaqua, Ill., Herefords.

Oct. 12.—Bolin & Aaron, Kickapoo, Kan., Poland-China.

Oct. 16.—W. B. Crooks, Eight-Mile, Mo., Poland-China.

Oct. 16.—J. K. Alexander, Edinburg, Ill., Shorthorns.

Oct. 17.—T. B. Hart, Edinburg, Ill., Poland-China.

Oct. 17.—Arthur H. Jones, Shorthorns, Delaware, O.

Oct. 17.—Chas. Ott, Shorthorns, Hedrick, Ia.

Oct. 18.—H. O. Minnis, Edinburg, Ill., Poland-China.

Oct. 21.—E. E. Axline, Oak Grove, Mo., Poland-China.

Nov. 14.—Hector Cowan, Jr., Paulina, Ia., Shorthorns.

Nov. 15.—S. M. Winslow, Okalosa, Mo., J. S. Goodrich, Goodrich, Kan., and Paul Byrd, Chillicothe, Mo. Galloways. Sale at Kansas City.

Nov. 15.—S. P. Emmons, Little Rock, Ark., Mexico, Mo. Shorthorns.

Nov. 22.—L. Logan, Chappell, Mo. Leonard, Mo. Walter Waddell and Thos. Sawyer, Lexington, Mo. C. B. Smith, and N. W. Leonard, Fayette, Mo. Herefords. Sale at Kansas City.

Dec. 6.—American Galloway Breeders' Association, Galloways. Sale at Chicago.

Dec. 11 and 12.—K. B. Armour and J. A. Funkhouser, at Kansas City, Mo. Herefords.

Dec. 13 and 14.—H. C. Duncan and Geo. Bothwell, at Kansas City, Mo. Shorthorns.

March 5, 1901.—T. J. Wornell, Mosby, Mo. Shorthorns. Kansas City, Mo.

Jan. 22, 24 and 25.—F. B. Sotham, Chillicothe, Mo., and others, at Kansas City.

### RALEIGH H. SANDERS IS DEAD.

The "Breeder's Gazette" of August 8 contains the sad news of the death on August 3 of Raleigh H. Sanders, after ten weeks of sickness, with typhoid pneumonia. Mr. Sanders was the second son of the late J. H. Sanders, founder of the "Gazette," was 27 years of age and a young man of rare promise. He had charge of the engraving department of the "Gazette," and the high character of his work was made manifest to the readers with each issue.

### SHORTHORN PRIZES.

J. H. Pickrell, secretary of the American Shorthorn Breeders' Association, Springfield, Ill., has favored the RURAL WORLD with a copy of Circular No. 14, which he is distributing. In addition to a synopsis of the business transactions of the association for 1899 by-laws, rules of entry and other matters of interest to stockholders, the circular contains a list of Shorthorn prizes offered during 1900 at the various state and district fairs.

Shorthorn breeders, who contemplate showing stock should get a copy of the circular. The liberal premiums offered will doubtless draw out big shows of the ever popular Shorthorns.

### TEXAS FEVER EXPERIMENTS.

RURAL WORLD readers have been informed regarding the valuable work that was being done at the Missouri Experiment Station by Dr. J. W. Connaway, with the co-operation of Dr. M. Francis, of the Texas Experiment Station, in effort to develop a practical method of rendering northern cattle immune to Texas fever. The editor of "Experiment Station Record," in No. 10 of Vol. 11, comments on this work as follows:

The investigation recently reported upon by the Missouri and Texas stations in combating Texas fever is an instance of a line of veterinary work in the legitimate province of the station veterinarians, which thorough and persistent investigation has brought to most successful issue. It is likewise a good illustration of the fundamental importance of research along lines which are more or less purely scientific, and the ultimate application of the results in practice.

The work of combating Texas fever has been in progress for a number of years. The Bureau of Animal Industry of this Department demonstrated it to be due to a protozoan blood parasite, and showed experimentally the agency of the cattle tick in carrying this organism and thereby infecting cattle with the disease. It was shown that the disease is not communicated by contact with a diseased animal, but only through infestation with infected ticks. Accordingly experiments were at first directed toward getting rid of the tick by dipping cattle in various materials. In this work the Missouri and Texas stations, as well as the last few years, have been co-operating for a number of years. Southern cattle were dipped and then shipped north to determine whether they could be safely mixed with herds there, and northern cattle were shipped south and then dipped for the purpose of preventing their infection by Texas fever. A single dipping was found insufficient to destroy all the ticks, and a frequent repetition of the process was found to be severe on the animals and not entirely effective.

Various attempts were made to render northern cattle immune to the disease in a manner similar to that in which southern cattle become immune, that is, by infestation with ticks. Such experiments led to

the investigations which have had so successful an outcome. Following the discovery by the Bureau of Animal Industry of the immunizing effect of the blood from immune cattle, a method was worked out and given a practical test. The mild attack developed by a single inoculation was found to confer only partial immunity, which could be rendered complete by a subsequent inoculation.

The Bureau experiments reviewed in the present number were made with ten ordinary grade animals. The work reported by the Missouri and Texas stations was with over four hundred animals, mostly thoroughbreds, and under conditions which were a severe test of the efficacy and practical application of the treatment. In general, thoroughbred cattle are more susceptible to the disease than grade cattle, and from a practical point of view the introduction of high-bred stock into the regions infested by Texas fever is very desirable and has often been attempted. Hence, the work not only demonstrates the reliability of the method on a large scale, but carries with it the solution of an exceedingly important practical problem for the south.

In the present state of the method, when due care is exercised, the loss from inoculation fever or from the development of the disease on account of failure in producing immunity is so small that it may almost be neglected. The loss for all the animals inoculated was less than 5 per cent. When proper regard is had to the condition and age of the animals, to the climatic conditions and to the care of the animals during the period from the inoculation to complete recovery from the inoculation fever, the method is thoroughly reliable. Northern cattle may be taken into infested regions in winter and under proper precautions immunized in the south, or they may be inoculated and rendered immune in the north before shipment.

The economic importance of this discovery is apparent when it is considered that under ordinary conditions from 40 to 70 per cent of northern cattle shipped into the infested regions die from the attack of Texas fever. This high rate of mortality has greatly hindered the shipment of high-bred northern cattle to the southern states for breeding purposes and for the improvement of beef and dairy herds. Repeated attempts have been made to introduce thoroughbred bulls into southern herds, but so often with disastrous results as to discourage attempts in this direction. This has exercised a very marked effect on the grade of cattle kept in the south, especially the dairy cattle, and has retarded the development of the dairy industry in that section. The removal of this barrier will probably do more toward promoting the dairy interests of the south than any other single factor in the problem.

### GRAZING A CORN AND COW PEA FIELD.

The Arkansas Experiment Station reports in Bulletin No. 58 the results from grazing steers on a corn and cow pea field (after the corn was pulled), supplementing this with as much cotton seed as the animals required. Five steers were fed on a five-acre field. The corn yielded 25 bushels to the acre, which was regarded as hardly an average crop. The cow peas made more than an average crop of vines but less than an average crop of peas. None of the latter were picked. The steers required 5 days to consume all the food on the five acres. They were allowed access to only one-third of the field at a time. The cotton seed was always accessible and was consumed ad libitum. During the first 30 days of the test, while the pea vines were yet green and peas were accessible, the steers ate very little cotton seed.

At the beginning of the test the five steers weighed 3,358 lbs. The average daily gain was two lbs. per steer. The average amount of cotton seed consumed per steer during the whole test was 350 lbs. Rating cotton seed at \$6 per ton, and making suitable allowance for the cow peas planted, the cultivation of the crop, and the labor of feeding the steers, the cost of a pound of gain was calculated to be 1.5 cents.

In estimating the cost of the grazing, the cotton seed and cow peas are charged to the feeding, but it is reasonable to suppose they will, as manure scattered over the soil, increase the yield of the succeeding crop more than their cost. The advantages of feeding cotton seed to the steers instead of corn are cheapness as a food and greater value as a fertilizer. It was estimated that the steers grazed the three lots of the field about as follows: On the first plot, one-third of the field, all the pea vines, husks, fodder, and about one-fourth of the stalks were eaten. On the second and third plots, each one-third of the field, frost having fallen October 22, the steers ate about two-thirds of the pea vines, all the husks and fodder, but scarcely any of the stalks. The results of the grazing of this field indicate that the cotton should be gathered and the animals turned to grazing as early as possible before frost.

### INBREEDING.

Judging from the tone of some of our live stock papers and some of the professors at our agricultural experiment stations, inbreeding is likely to come in favor again with a certain class of breeders, says "Wallace's Farmer." Many arguments can be produced in favor of it. It can be said truly that the founders of breeds were almost invariably in-breeds; not only breeding in but in-and-in, incestuous breeders, breeding early to daughter, son to dam, brother to sister, not once merely but over and over again, practicing every form of incestuous breeding, and that in this way they laid the foundation for the formation of breeds and the production of individuals which have become famous as the breed itself.

All this is true, but it does not follow, therefore, that the farmer should practice in-and-in breeding. While this class of breeding will fix the type, whether for good or ill, while it will produce some animals of remarkable beauty and symmetry, when done by an expert in mating live stock, the farmer who follows it, either intentionally or accidentally, or by neglect or unwillingness to buy sires for his herd, will do it practically to the ruin of his herd. Because Bates, or the Collings, or Cruikshank, among cattle breeders, or any of the noted breeders of sheep, hogs, or horses, can do this successfully, and with some of the best results, and many bad results of which he never allows his neighbor to hear, it does not follow at all that the ordinary farmer can follow his example.

Generally it will reduce the size. Nearly always it will reduce the vitality. In nine

cases out of ten it will increase the tendency to disease, and for these reasons the man who follows it, either intentionally or unintentionally, does it to the lasting detriment of his herd. We have experimented in this line, especially with hogs, and the results are as above described. We would under no circumstances permit it in a herd of hogs except simply to see for ourselves the evil results.

Bates, the Collings, Bakewell and other early improvers, could practice inbreeding with comparative impunity; they had a vigorous stock of native cattle to start with. They could afford to sacrifice all the misfits and the deformed. They could wipe out the evil results of inbreeding and exhibit to the public only the best. The ordinary farmer can afford to do nothing of this kind. He is raising live stock for a livelihood. With him health and vitality are of the utmost importance. Let him select sires as carefully as he can, he will find a good deal of the same blood; in other words, he is compelled to be a line breeder, that is, to cross on his young things animals which in two or three generations back run in the same blood lines. If he will extend the pedigrees of his bulls five generations, he will be surprised to see how many times they run back to some noted animal. The same is true of his sheep and hogs. A line breeder he must be by force of circumstances for the reason that whether in hogs or cattle the best breeders all over the state, and if he buys of noted breeders, or even from those of little note, he is getting largely the same blood.

We remember once in purchasing a boar at the state fair we took every precaution to get one not akin. We were quite sure we would succeed, but after the purchase we found on one side that we were only two removed. Do not allow any professor of an agricultural college or noted breeder or agricultural paper, to lead you into the folly of in-and-in breeding.

It has been often noted that the mating of animals of two distinct breeds of live stock, say of Herefords and Poland-Chinas, or of Duroc Jerseys and Poland-Chinas, results in animals which for most purposes are superior to either one. We have of late come to the conclusion that the reason for this lies in this fact, that under these circumstances there is no possible line breeding; in other words, that the mating of opposite breeds does not increase vitality, but maintains vitality, or prevents a lowering of vitality, the result of continuous line breeding.

We take it to be a most remarkable fact that nearly all the great breeders, when they sold out and dispersed their herds, had carried them to the point that they themselves knew it was not possible for them to carry them further. They had become wedded to certain strains of blood, and their judgment, warped by their own pride, but they still had sense enough to perceive that while the strain or breed might be improved, it must be by some man whose judgment was not warped by his affections.

Cruikshank produced one of the finest strains of cattle that has ever been produced. He did it by selecting the best individual without much reference to blood. He kept always the tale to be sold from the yards at the close of the last-finished week's business is a pleasant one, and as the rise has taken place in the face of liberal receipts it is only fair to presume that the present price level will prevail for some length of time.

### BRITISH SHORTHORN BREEDERS.

At the meeting of the British Shorthorn Breeders' Association held in the Royal Show Yard at York the consensus of opinion was that the present condition of the world's pedigreed cattle business fully warrants the calling of a cattle-men's convention similar to that recently held by the sheepmen at the Royal Show. If the present conditions are to continue it would seem as though benefit would accrue from such a meeting, for then arrangements could be made for the issuance of identical export certificates and for the adequate protection of purchasers against animals infected with or suffering from disease. It may be that the English breeders of Shorthorns have in view the securing of a relaxation of the regulations enforced by both the United States and Canadian Herd Books with reference to animals not tracing to ancestors recorded in the first twenty volumes of Coates' Herd Book, but at all events there are many questions that could profitably be considered by such a gathering, and it could well enough be called next season, when the majority of American, Canadian and South American purchasers are in Great Britain.—Breeder's Gazette.

### STOCK NOTES.

HERDSMAN WANTED.—I. G. Jones, Towanda, Ill., is advertising for a herdsman. The right sort of a man will find a good place with Mr. Jones.

SHROPSHIRE RAM.—W. D. Wade, Lamotte, Mo., advertises in this issue a Shropshire ram, a fine individual and a good breeder. He can be bought for a reasonable price.

A CURE FOR BLOAT.—Will some one among RURAL WORLD readers tell me how to treat bloat in cattle caused by grazing on clover? S. N. WILSON, Laclede Co., Mo.

In the RURAL WORLD of July 25, on page four, under the head of Stock Notes, will be found directions for treating cases of bloat.

SHROPSHIRE RAMS.—I. G. Jones, Towanda, Ill., is advertising in this issue a Shropshire ram. Mr. Jones has a good flock of well-bred sheep. He will sell his stud ram or exchange him for one equally as good.

A SPECIAL ORDER.—Secretary of Agriculture James Wilson has issued the following special order: "It is hereby ordered, that Canadian cattle may be imported into the United States for exhibition purposes at the International Live Stock Exposition to be held from Nov. 1 to Dec. 8, 1900, at Chicago, Ill., without being subject to the tuberculin test, provided they are accompanied by a certificate issued by a Canadian official veterinarian, stating that such cattle are free from contagious diseases, and provided further that they are returned immediately to Canada at the close of the exposition. If Canadian cattle, sheep and swine intended for this exposition must be shipped directly to the exposition grounds and not unloaded in any public stock yard."

### ST. LOUIS NATIONAL STOCK YARDS.

Market Report Furnished by Evans-Balder-Buel Company.

RECEIPTS during week ending Aug. 11 were 15,607 cattle, 22,410 hogs and 1,888 sheep, against 17,781 cattle, 20,168 hogs and 5,709 sheep the previous week, showing decrease of 2,174 cattle, increase of 2,537 hogs and 6,159 sheep; as compared with corresponding week year ago, an increase of 2,500 cattle, decrease of 4,400 hogs and increase of 7,000 sheep. The four leading western markets this week received more cattle than ever arrived before for corresponding week. The total was about 160,000, or 15,700 more than previous week, about 21,000 more than year ago, and 45,000 more than corresponding week in 1898. The big increase in cattle receipts at western markets was made up principally of western ranchers, as the season is several weeks earlier than usual.

CATTLE.—Receipts of native cattle have been fairly liberal here and quality ranged about same as on previous week, the decrease being in the quarantine division. The native trade was about the same as last week, and prices were very satisfactory. Market closed on Friday practically the same as last week. Best steers here averaged from 1.45 to 1.55 lbs. and sold at \$5.75. Some strictly choice steers could have been sold as high as \$6.00 per cwt. The range between the good, thick-fat cattle and the half-fat, greenish kind is getting wider, and greenish kinds are not in as good demand as better grades, on account of grass and western cattle. Bulk of 1,300 to 1,500 lbs. steers sold at \$5.50 to \$5.75, 1,200 to 1,300 lbs. \$5.00 to \$5.25, 1,100 to 1,200 lbs. \$4.50 to \$5.25. Receipts of cow and heifer butcher cattle were only moderate, and prices on very best grades ruled steady throughout week, fair to good grades sold 15 to 20c lower. Best butcher heifers here averaged 750 lbs. and sold at \$4.80. The middle class of cows also ruled 15 to 20c lower, while culling grades were from steady to 10c lower, and very best grades about steady. Receipts of stockers and feeders have been liberal, and prices on best grades declined 15 to 20c per cwt., with very few of this class offered for sale. The medium and fair to good ones declined 25 to 50c, compared with close of last week. The commonest class were very slow sale at very low prices. The European market for United States cattle was quoted lower, and exporters bought considerable less cattle this week than on last. Quotations as follows are calculated on present basis of value: Best native beef steers, strictly fancy cattle, 1,300 to 1,500 lbs. average, \$5.50 to \$6.00; choice export steers, 1,300 to 1,500 lbs. average, \$5.50 to \$5.75; good shipping and export steers, 1,300 to 1,500 lbs., \$5.25 to \$5.45; fair to medium shipping steers, 1,200 to 1,400 lbs., \$4.85 to \$5.15. The bulk of the native beef steers averaging 1,300 lbs. and upwards were of good to choice quality sold at \$5.25 to \$5.70 and the top prices were \$5.75 for 1,450 and 1,550-lb. offerings. Steers, 1,200 to 1,250 lbs. average, full range, rough to best, \$5.00 to \$5.50, bulk of sales at \$5.00 to \$5.50; steers, 1,000 to 1,150 lbs. average, full range, \$4.25 to \$5.35, bulk of sales at \$4.50 to \$5.25; range weighing less than 1,000 lbs. full range \$3.40 to \$5.25, bulk sold at \$4.50 to \$5.00; feeding steers, fair to choice, 800 lbs. and upwards, \$3.50 to \$4.75, bulk at \$3.70 to \$4.00, and they were very plain quality; common to choice stockers, \$2.25 to \$4.50, bulk at \$2.15 to \$3.75, and the quality was common; stock heifers full range \$2.00 to \$3.00 and the bulk at \$2.50 to \$3.25. Fancy native heifers sold at \$4.70 to \$5.00, and there were very few on the market; choice native cows and heifers sold at \$3.50 to \$4.50; medium cows at \$2.75 to \$3.40; fair cows \$1.50 to \$2.40; inferior, light and old cows \$1.00 to \$2.40; the bulk of the Southwest cows sold at \$2.40 to \$3.15 and the bulk of all the cows sold at \$2.75 to \$3.75; culling cows sold at \$1.50 to \$2.50. Veal calves, full range \$4.00 to \$5.00 per 100 lbs., bulk at \$5.50 to \$6.25 per 100 lbs.; heretics and yearlings sold at \$2.25 to \$4.00, bulk at \$2.50 to \$3.50; yearlings, 100 to 150 lbs., with the bulk at \$3.00 to \$4.00. Bulls, full range \$2.50 to \$4.00, bulk of sales \$2.00 to \$3.25; stocker bulls sold at \$2.65 to \$3.40, the bulk at \$2.55 to \$3.15. During the week the milkers sold at a full range of \$2.00 to \$4.00 per cow and calf, the bulk of sales being at \$3.00 to \$3.50.

Receipts in quarantine division this week amounted to 346 cars, bulk being from Indian Territory. Quality was about same as on last week and good steers at close this week figure shade stronger than last, while medium and common ones are 5 to 10c lower. Calves are fraction higher; cows and heifers held about same. The best steers in quarantine division averaged 1,122 lbs. and sold at \$4.50. Bulk of 950 to 1,100 lbs. steers sold at \$3.90 to \$4.50, 800 to 950 lbs. \$3.60 to \$4.00. Light weight steers, 650 to 800 lbs., \$3.00 to \$3.50, best grades fed at \$3.50 to \$4.00, are quotable at \$4.75 to \$5.35. Cows and heifers \$3.00 to \$3.25, bulk \$2.50 to \$3.35, bulls \$2.50 to \$3.25, steers and oxen \$2.25 to \$4.25, calves \$2.50 to \$3.00 per head, yearlings \$2.00 to \$2.75.

HOGS.—Tuesday, with liberal run, market was 5 to 10c higher, with bulk selling at \$5.35 to \$5.40, with 55 select, averaging 265 lbs., at \$5.50. Wednesday, strong, 5c opened 5c to 10c lower, but before it was fairly established was 5 to 10c lower, bulk selling at \$5.25 to \$5.40. Friday, with heavy run and unfavorable advices from other points, market was full 10c lower than Thursday, bulk \$5.25 to \$5.30, with lights selling at best prices. Saturday, with light run, market opened shade lower. Range of prices: Butchers and packers \$5.20 to \$5.25; Yorkers and shippers \$5.25 to \$5.30; heavy pigs \$5.15 to \$5.25; light pigs \$4.50 to \$4.75; rough heavies \$4.50 to \$5.00.

SHEEP.—With 6,500 sheep and lambs on sale Tuesday the market on lambs declined fully 50c per cwt., while sheep sold weak to 10c lower. Under moderate receipts for balance of week the market advanced 25c per cwt. on lambs, while sheep sold strong and active. Receipts of stockers here have been light and the market steady. We quote following prices: Best lambs \$5.00 to \$5.25; best sheep \$4.00 to \$4.50; best bucks \$2.50 to \$2.75; stockers \$3.00 to \$3.75.

Monday, Aug. 13, 1900.—CATTLE.—Receipts of cattle at Chicago to-day reported at 22,000 and market 10c lower on everything except strictly best. Kansas City reported 11,000, and about 6,500 were on sale at this market. Receipts in native division were moderate for Monday, and market steady to 10c lower. Cattle in quarantine division sold 10 to 15c lower.

HOGS.—With light run here and very heavy run at Chicago, market was 5 to 10c lower.

SHEEP.—Receipts light, market strong to 10c higher on lambs, steady on sheep.

If you feed and water stock, write O. K. Harry Steel Works, St. Louis, for Catalogue.

## SHORTHORN BULLS FOR SALE!

Baron Thorndale 125,000; Lark House 40,000; or will trade him for better. Also 6-year bulls by Baron Thorndale and out of dams of Baron Thorndale and Secret, these strains have been in the line since 1860, and are great milkers. Call on or address L. G. JONES, Towanda, Ill.

## Gentry Bros., Sedalia, Mo.

CEAR VALE STOCK FARM.  
Grand Duke of Haverhill 150,000, sired by Waterloo Duke of Vale 138,000, and Waterloo Duke of Cedar Vale 130,000 heads out here of pure Bates and Blue topped, pure Scotch and Scotch topped cows of the most fashionable families.  
30 Young Bulls and Heifers for sale at reasonable prices. Parties met at train. Farm 3 miles out.  
TELEPHONE NO. 26.

## IDLEWILD SHORTHORNS!

Special offering, 20 yearling bulls, 20 yearling heifers. Largest herd in the state and 20 pure Cruikshank cows. Also some Scotch families, and sired by Chief Vindicator—sired by Imp. Spartan Hero 7702, out of Imp. Golden Thistle, Vol. 26, by Scotch Champion, Lady by Champion of England. This blood made Cruikshank famous.  
W. F. HAINES, VERMONT, COOPER CO., Mo.

## SHORTHORNS, BERKSHIRES and JACKS.

Shorthorns Scotch or Scotch Top and Bates mostly. Berkshires best blood in America and England. Stock of all ages and both sex for sale. Call on or address, N. H. GENTRY, SEDALIA, Mo.

## ST. LOUIS NATIONAL STOCK YARDS, THE LIVE STOCK MARKET OF ST. LOUIS.

Located at East St. Louis, directly opposite the city of St. Louis. Shippers should see that their stock is billed directly to the National Stock Yards.  
C. G. KNOX, Vice-Pres. C. T. JONES, General Mgr. L. W. EAKES, Asst. Gen'l Mgr.

## CHOICE SHORTHORN BULLS FOR SALE!

13 Scotch and Scotch topped bulls of the low down, blocky type. One is a Cruikshank Orange Blossom, one a Ramden. Also a few choice heifers not related to bulls. Address, PUDY BROS., FAIRVIEW STOCK FARM, HARRIS, Mo.

## BLACKWATER SHORTHORNS! F. M. MARSHAL, Prop., BLACKWATER, CO.

Herd headed by the Cruikshank Bull, Orange Hero, by Godoy. Females are of pure Scotch and pure Bates, with individual merit the standard. Young stock of both sex for sale.

## CRYSTAL SPRINGS SHORTHORNS

15 Yearling Bulls and 15 Yearling Heifers, all reds, for sale, out of sows of the Kirklington, 12,000, Duke of Sharon, Princess, Brackets and Goodness families, and sired by Chief Vindicator, 11,000, Kirklington, Duke of Haverhill 11th, 12,000 and Woodville Victor 12,000. Come and see them. They will bear inspection. Farm joins town.  
J. F. FINLEY, Breckinridge, Mo.

## "Pasteur Vaccine"

SAVES CATTLE FROM  
**BLACK LEG**

Nearly 2,000,000 successfully treated in U. S. and Canada during the last 5 years. Cheap, safe and easy to use. Pamphlet with full particulars, official endorsements and testimonials sent FREE on application.

## Pasteur Vaccine Co., Chicago.

BRANCHES: St. Paul, Kansas City, Omaha, Ft. Worth, San Francisco.

## Veterinary.

Answers to questions in this department are given by Dr. T. E. White, former State Veterinarian for Missouri, Sedalia, Mo. Write questions on one side of paper only, and separate from other business. Those wishing a written reply privately must accompany their requests with a fee of one dollar, the professional opinion being one of private advantage.

BLOODY MILK.—I have a cow that two or three weeks ago commenced to give bloody milk out of one teat, and now gives it out of the rest. Can you tell me what to do to cure it? There is no apparent cause. The cow is in good health and in good condition. C. E. KEARNEY, Rails Co., Mo.

Bloody milk is due to one or more of the blood vessels being ruptured either in one quarter or perhaps all. The rupture is brought about by a number of causes—disease of the udder, an over-distension with milk, mammitis, caked udder or garget, tumors, tuberculosis, blows from sticks and stones, being run by boys, etc. Keep the cow away from other animals. If the udder is caked poltice it until all swellings have subsided; milk her clean several times a day. As you do not state conditions of udder, and we are at a loss as to the cause, would advise consulting a veterinarian. If this is not practicable consult your family physician.

WORMY LAMBS.—I have some lambs sick with scours. I have lost seven, and there are more taking it. None of the ordinary cures have done good, such as raw eggs, flour and water, etc. I have examined several that have died. The third stomach has fine worms in the outlet, and the fourth stomach is full of black water and worms around the lining. The most of the flock are doing well, and only a few of the old sheep have it. St. Clair Co., Mo. D. R. WILKINS.

In the RURAL WORLD of August 8 there is quite an exhaustive article on the kind of worms that are no doubt infesting your lambs. The remedies recommended might be profitably used by you in treating your stock.

THOUSANDS OF HAPPY HOMES.

If anyone contemplates a change of residence, he should not overlook the attractions and advantages of Utah. There are thousands of acres of splendid land at various points on the line of the Rio Grande Western Railway in that state. The soil is very productive and the market close at hand. The climate is superb, being temperate the year round. The sugar beet industry as well as fruit culture, etc., are prominent features of these agricultural districts. Send 2 cents postage for a copy of "Utah," a pamphlet containing a full description of the state, its resources, its climate, its soil, its fruit, its stock raising, its sugar beet industry, its fruit culture, etc., and its general features. Write to Geo. W. Hents, General Passenger Agent, R. G. W. Ry., Salt Lake City, Utah.

If the barnyard is so situated that the rains wash it and run the washings down the hill, run the liquid manure on to the garden or the small fruit. Don't let it go to waste.

## AUCTIONEERS.

JAS. W. SPARKS, Live Stock Auctioneer, has been appointed by the court of St. Louis, Mo., to sell the following live stock, hogs and horses held in America. Terms low.

J. WEST JONES, LENOX, IOWA, and J. WEST JONES, LENOX, IOWA, have been appointed by the court of St. Louis, Mo., to sell the following live stock, hogs and horses held in America. Terms low.

DAIRMEN AND STOCKMEN  
Realize more and more each year the millions of dollars lost by the shrinking of MILK and BUTTER in their oiliness. The "Shrink-Proof" process has been tested and approved. Thousands of pounds of milk and butter have been saved by the use of the "Shrink-Proof" process. The "Shrink-Proof" process is a simple one, and can be obtained in most every country in the Union, or by sending 2c to the Shrink-Proof Mfg. Co., 1200 Fairmount Ave., Philadelphia, Pa. They will refund money if cows are not protected. Get the genuine. Beware of imitations.



## Horseman.



In recounting the prowess of successful drivers, particularly of those who drive a sulky, it is not to be forgotten that the horse in the home stretch, it should be remembered that the horse plays the most important part and the winning animal has generally a little more speed and strength left for a do or die effort than his beaten competitor.

While at the Holden, Mo., fair last week we learned that the dam of Mary A., 2:14 1/2, was sired by Monitor, 1877, formerly bred and owned by the Colman Stock Farm. She was bred and raised by Ransom Blackburn, Knob Noster, Mo., as was her dam also. Mr. Blackburn also bred and raised George Brenner, 2:17 1/2, and he was also sired by Monitor, 1877.

The Colman Stock Farm horses were quite successful at the Holden, Mo., fair last week. Monnet, by Walnut Boy, dam by Monitor, won on Wednesday the 2:35 race in three straight heats, and on Thursday he won the 2:30 race in three straight heats, best time 2:35, on very slow track. Mongold, b. s., by Allendorf, dam by Monitor, won the second money, in the 2:24 trot, best time 2:24. Alpha Wilkes won third money in the 2:30 trot.

Creusius has not yet been proclaimed the king of trotting stallions, as the 2:04 of Directum still stands as the top figure, but in the mind of every horseman, no doubt, he is considered the greatest trotting stallion that ever graced the American turf. His heats in 2:07 1/2, 2:06 and 2:06, in Columbus, following so close upon his heats in 2:07 1/2 and 2:06 at Cleveland, are by long odds the fastest.

The Wilkes Boys' come to the front every year. On the grand circuit last week his son, York Wilkes, took a record of 2:12 1/2, and last week his granddaughter, May Alcott, took a mark of 2:12 1/2, and both were winners of five-heat races. It is worthy of note that the blood of American Star is prominent in the blood lines of these good trotters. York Wilkes is out of a Robert McGregory mare, while May Alcott's dam was got by a son of Aberdeen. Grattan Boy, who won second money in Creusius' great races, is by a son of Wilkes Boy and out of a daughter of Robert McGregory.

And now the war in China is demanding blooded horses as well as human blood to sacrifice. A dispatch from New York says the German government alone has sent agents to the United States with orders to purchase 30,000 horses in the United States immediately for shipment to China. The order includes three grades, light horses for transportation and cavalry, medium grade for transportation, and heavy horses for artillery. And we have no horses to spare. Four representatives of the German government are already here making purchases.

A queer disease which is quite prevalent among the horses following the Grand Circuit is known as "cording," says the "Horseman." Several horses were stricken with it last season, but it is attacking many more this year. It is believed to result from a kidney ailment. The horse attacked by it will first be sore and tender over the loins and a little later will suddenly go lame in one hind leg. The cord that extends down the inside of the leg being affected. At Cleveland the gray gelding, Who Is It, 2:10 1/2, after going two heats in the 2:10 trot, was suddenly taken with this trouble and became so lame that he could not start in the final heat. Another horse that was attacked at Cleveland was the bay mare, Emma M., 2:12 1/2, in W. B. McDonald's stable. She was to have started, but a couple of days before the race she suddenly "corded up," as the trainers say, and there was nothing to do but keep her in the stable. The ailment is not dangerous, but it is proving to be very expensive as well as annoying, to trainers whose horses are attacked by it.

At the matinee at Forest Park Saturday last the races were close and interesting. The following are the summaries:

Classified trot:  
Al Smith, br. g. (Louis Spelbrink)..... 1  
Monnetta, br. g. (Colman Stock Farm)..... 2  
Pinto Archie, b. h. (F. W. Holtgreve)..... 3  
Time—2:41, 2:38.  
Classified pace:  
Will Hal, b. g. (W. G. Eversole)..... 1  
Billy Steinman, blk. g. (F. E. Flanagan)..... 2  
Legal Boy, ch. g. (E. P. Tesson)..... 3  
Jennie Grattan, ch. m. (Thomas E. Barrett)..... 4  
Katie S., b. m. (F. W. Loesekam)..... 5  
Time—2:24, 2:20 1/2.  
Classified trot:  
Ray Bates, br. h. (Laurits Petersen)..... 1 3 2 1  
Wilkesgaid, b. h. (Colman Stock Farm)..... 2 1 2 1  
Hal Dumas, b. g. (Montezuma Stables)..... 3 1 3 4  
King Mack, b. g. (Louis Spelbrink)..... 4 3 3 3  
Time—2:37, 2:32, 2:30 1/2, 2:30 1/2.  
Jim Ramsey, ch. m. by John R. Gentry, dam by Monitor, took a record at Ottawa, Ill., Aug. 2nd of 2:12 1/2.

A good brood mare on the farm with a colt by her side, is an evidence of prosperity. We may figure cost of food, but the farmer who grows a colt every year has only to grow to the demand of the market to find that, somehow or other, the price realized is pretty good profit. It is so to-day, and will surely be so for the next ten years.

## Leg and Body Wash.

Racehorses often become sore and stiff from continued strain on the hard tracks. Nothing takes the heat out of a horse's legs and body like a wash compounded of diluted **Tuttle's Elixir** applied to the legs and put on light bandages from the body and just on the legs. It is guaranteed to produce desired results of money for any other wash ever used.

Our 100-page pamphlet, "Veterinary Experience," is FREE. Write to Dr. S. A. TUTTLE, 21 Beverly St., Boston, Mass. Send for a bottle of **Tuttle's Elixir**. Avoid all others; they offer only temporary relief if any.

## L. E. CLEMENT'S HORSE GOSSIP.

Editor RURAL WORLD: Walnut Boy has up to the present time one new and one reduced record. Hirschel has one reduced record. Anteroe adds two new ones. Herndon and Victor Ene have their first. Goodwood has one reduced record. Lord Wilton owned by M. Beamer has a new one in Fortune Hunter, dam by Revenue, 2d dam by Pilot Mambrino 62, 3d dam by Merchant, John R. Gentry, Theo. Shelton and Billy B. were all purchased as colts, and developed by Missouri owners.

The third meeting of the Market Fair, Carthage, Mo., has been held. The management here had an opportunity to learn. They might have placed advertisements where they would have done more good. They advertised the worst fake I ever saw extensively, in local press and by large board bills, an automobile race, in which a gasoline and an electric machine went around the track twice, between 4 and 5 minutes, and there was so little interest in them that it seemed to take 20 minutes.

The racing with harness horses was first-class, except on Wednesday, when there were only three starters in each race and won in straight heats. Frank Ervin reduced his trotting record from 2:29 1/2 to 2:24. Avenue King, that entered the 2:30 list at Nevada, reduced his record to 2:24. A good three-year-old filly, Little Raven by Aladdin, dam by Rounds Sprague, that drove M. D. by Conductor out in 2:24, the only new standard performer at the meeting.

On the first day after the horses were on the ground, the drivers refused to start until the track was put in shape, with a good Seth Griffith machine idle at the gate. On the last day no sprinkling was done on the track, although the wind was high, and the dust blowing in the face of the audience. The star attraction was the performance on a bicycle of Mr. Kilpatrick. The money might have been better spent if added to the purses that were all too small for such a field of horses. There were many opportunities for an apt pupil to learn and profit by the errors of 1900. The Carthage track cannot be put in shape for good racing next year, if it is not attended to this fall. H. E. Woods of Norborne, Mo., did the starting. Mr. Woods is an old driver, although a young man. He understands that when horses pay \$50 for the privilege of starting for \$100, the most they can win, and then pay board for three or four with freight added, that the man that wins has nothing to throw away, and the fellow who does not win can't always borrow to pay a fine that should not have been assessed. Mr. Woods owns the great sire Truce, brother to Norther, one of the best race horses ever developed in Missouri.

I see some one says Grattan Boy is the best bad galloped horse that ever started, and that he gets his straddling Wilkes gait from his sire. It is not hard to find where he gets the bulldog determination to drive out such a horse as Creusius in the three fastest heats ever trotted by any stallion. A new sire of a standard trotter is Kindergarten, son of Blue Bull. This is one of the youngest sons of Blue Bull, and was bred by the late James Wilson and was owned by Rich Wilson owner of Arrowwood, the highest priced weaver ever sold at public sale. Kindergarten is a bay with less substance than any son of Blue Bull I have ever seen. His dam was Tinnie Wilson, by Legal Tender. In the 2:40 trot at Marion, Ind., the black gelding Morning Star by Kindergarten, won in straight heats in 2:36 1/2, 2:37, 2:36 1/2. When the Year Book credits White's Blue Bull with White, 2:19 1/2, Blue Zero (Schumerhorne), 2:17 1/2, and Kindergarten with Morning Star, 2:36 1/2, and Blue Vein with Onocenta, 2:34, fifty sons will be credited with 51 trotters and 74 pacers, a gain of 5 over what the Year Book now gives him.

There were few horsemen at the Carthage meeting who were there either last year or two years ago, and there will be still fewer another year. It should be plain to anyone that the meetings cannot fill enough nor half enough stakes to make a meeting, and if they do not more than half the entries will get there paid up so they can start, as was the case at Carthage where not more than half the entries were clear on the books so they could start. It is commendable to want to win as much money with a horse as possible, but you can't keep up unless you have a winner and if you do you chances are good to have a good horse in his class, even after he has taken a standard mark. Those who made early entries, hoping they could go through the circuit and win are the men who must go home and find money so they can pay off suspensions and start next year, and many of them who have good horses will not try to clear themselves until they are ready to start in 1901, and they will be a little bit late about entering in early closing stakes next year.

In the free-for-all trot at Carthage Nellie Grove was considered a sure easy winner. She had 41 winning heats in standard time to her credit at the close of 1899. She went away from the wire fast, but collapsed before the first heat was finished and scarcely came home at a four-minute gait. Mr. Townley, her owner and driver, said he thought she had broken down and did not urge her. She was distanced and in two hours appeared as well as ever. She raised a colt last spring. She is the best trotting race mare on a half-mile track that I know of.

Prince Alert, 2:30, is out of a mare by John Black, son of Blue Bull. This horse died young and is credited with no standard performers.

McDowell, 2:25, the sire of the little pacer that won at Nevada, Mo., is not as was stated by Princeps, but is by Triton, the brother to Trinket, 2:14, and is the only standard performer by him and the third of his sons to sire standard speed.

Chauncey Summer, the secretary of the Galena, Kan., Fair Association, sold Don, 2:07 1/2, at Columbus, Ohio, the day he was second in 2:06 1/2 for \$2,000. The horse in question is a brown gelding, was in a fire and his neck and poll were badly burned, taking off the points of his ears. He has been in the string of W. T. Ervin, who drove him to his record as well as even Riley B. to the four-year-old record of the year—2:06 1/2.

D. M. Ervin drove the bay gelding Frank Ervin to his record of 2:24 1/2 and drove a good race. The horse was paced so long he can hardly be depended on for a trotting race yet, but in the three heats he did not waver from the diagonal gait once and won with ease.

Needs this season with Andrew Allison, the big son of Amos, the driver of Avenue King. Says he is not much of a hand for pushing colts, but he says he thought he saw the best lot of young things at E. Knell's farm that he has seen anywhere, and would like to try his hand with one or two of them. Mr. Harm, who was at Carthage, says he has done a satisfactory business with Jimmie H., 2:21, at Belton this season. From Mecca and Clinker mares of this fellow should make a great showing. Missouri will be in line from this time forward, with the best that can be bred. We are not breeding Wilkeses, nor Mambrinos, nor Belmonts. We are breeding horses on the Eclectic plan.

## REARING COLTS RIGHT.

Shade must be supplied mares and foals that are kept continuously in pasture. The best way during the warmest of the summer months and the worst of fly time is to confine the bands indoors during the day and let them out to the grass at night, feeding them grain as described last week twice a day for the mares and whenever the foals want to pick at it. Still when this cannot be done, owing to the demands on the time of the owner or the location of the pasture land, a very good substitute may be found in the furnishing of ample shed room for both old and young. Select the proper spot (as indicated last week) and there near the "foal creep" erect a roomy shed without windows, but with a door wide enough to prevent crowding. Herein the mares and foals may take refuge from the rays of the fierce sun or the driving rain and the flies will not penetrate into the darkness in any numbers. Such sheds may through lack of attention become breeding-places of pestilence, and if not being cleaned out. The good done by the shade may be more than counteracted by the emanations from the filth allowed to accumulate. The land on which the manure is spread will give back fourfold the expense of keeping the shed clean. The "creep" for the foals also ought to be roofed in and it is no bad idea to have another sort of a shelter, one without sides, under which the mares may stand on windy days. Place the required number of stout poles in the ground (sometimes four will be enough) and then construct a pole roof, thatching it with marsh hay so that it will shed rain. The cost of such a shelter is very slight. The mares will divide the days between the shed and the shelter, the amount of wind blowing regulating their ability to fight the flies satisfactorily. The shed may be constructed of rough boards for the walls, straight poles for the posts and roof supports and slough hay for the roof material. This equipped mares and foals will all do very well if kept in the field all summer long and properly fed.

In some years of plentiful rainfall the pasture grasses will supply a sufficiency of succulence until well toward the end of August. In other seasons the supply is gone by the middle of July. Mares that are judiciously fed on grain as already described will keep in fat health even on rather short pastures, but the foals will not do so well and the teachings of experience are that for the two to do as well as they ought a bountiful ration of succulent green food must be given every day and better twice a day. With this object in view the owner ought to plant somewhere convenient to the pasture he designs for the use of the mares and foals a patch of sweet corn and field corn and get it into the ground early—the earlier the better for the matrons and their young. As soon as the pastures show signs of being inadequate to requirements, some of the sweet corn ought to be cut and thrown over the fence to the mares and foals. Even if there is a fair bite of grass the addition of the green sweet corn will be very welcome, and will promote an increased flow of rich milk for the foals. Cuts and field peas sown together and cut green make a most acceptable meal for mares and foals and they may be used to the very best advantage all over the grain-growing West. Following these the sweet corn and then the field corn will come into use and in this way the foals may have not only a nice sweet bite of green stuff fresh to their mouths all season long, but they will have the most bounteous supply of rich milk that the mothers may be forced to give. Why will not foals thus reared do much in the way of starting as they should?

A surprising small patch of ground will suffice for growing the green stuff for mares and foals in this way. The land on which the peas and oats are grown may be plowed up as cut off and planted to corn with the result that the fall supply may be had from the same breadth that grew the earliest sweet forage for the summer. A narrow strip along the end of a field will keep in fat health depending on the number of mares and foals to be fed. The attendants should note carefully how much is required, then feed only that amount. There is nothing to be gained by strewing on the ground more than will be cleaned up fairly well at least by the time of the next fresh ration is due. If the care of the mares and foals is entrusted to an intelligent man he will see to it that the green stuff is individual and collective capacity and both in the green and dry grain feeding there will be no waste.

Shade, shelter and soiling stuff thus having been provided in addition to a sufficiency of grain, it will be no hard matter in the fall to pick out of a band a few mares and foals almost fit to take to the State or county fairs—almost, but not quite. There is nothing to be gained by doing anything by hand. If the intention is to make a showing at any fair great or small, the mistake of underestimating the prowess of an adversary should never be committed. No matter if it is known that in the territory interest there is no foal capable of beating the chosen representative of the farm, the better the shape in which that representative is shown the greater will be the measure of fame gained. There is little of sentiment in modern showing practice, but if a farmer can win a reputation for having good horses of all ages, he has at the same time gone far towards supplying himself with a ready market for surplus stock he may wish to sell.

Therefore, a month before it is time to go to show, pick out the best mares and colts, making the selection with due reference to the conditions governing the prizes it is desired to win. Take the mares and foals to the stable and make arrangements for them to be outdoors only in the cool of the evening and not too long. It takes work to fit mares, foals and horses properly for show and if the owner does not intend to do that work he would better not exhibit at all or if he shows, do so with the full knowledge that he stands to be beaten by the more intelligent breeder who takes no chances, but gets the best possible out of the material he has at hand. The coats of both mares and young will show the effects of their exposure to the hot sun, driving rain and chilly dew. Blankets of suitable thickness should be fitted to them and good grooming should become a part of their daily care. Their feed should be increased. A little boiled barley may be added to the ration of ground oats bran and the amount fed divided up into four portions given at as many different hours of the day. Some dry hay of the best quality and some dry whole oats also should be given as required. Definite quantities cannot be prescribed, the individual capacity of each mare must govern. Plenty of the succulent green food to which they have been accustomed on the pasture must be provided and the dry hay and dry whole oats will counteract any tendency to too great looseness of the bowels. In this way mares that have been well done to during the summer may in a month be put in show shape. The feet of old and young ought to be looked to most carefully. Level the foals' feet with the rasp, eschewing the use of the knife altogether, and keep them level. Most of the mares will be well to protect with smooth narrow shoes, yet avoid, but some may not need them. Full attention should be paid to this in order that all may be able to show to the best advantage when required in the ring—Breeders' Gazette.

## ABOUT THE FAST ONES.

Hawley in his notes to the "Stock Farm" says:

And still Creusius continues his all-conquering career. Just where a horse that is beat him is to be found no one seems to be able to state. His race at Columbus was the best one since Alx trotted in 2:06, 2:06 1/2, 2:05 1/2 at Terre Haute six years ago, and the champion mare had a faster piece of ground to go over than did the stallion. It now seems almost a certainty that a new stallion king will be crowned before the season is over. While Creusius was all out in his third heat in 2:06, that does not necessarily mean that he cannot beat that time. His first heat or his second quarter indicates his speed; therefore it is only a matter of condition for him to beat the time made at Columbus. Well rated he should trot right now over the Readville track or one equally fast in 2:06. While some talk has been heard about a match between The Abbot and Creusius it seems too much to expect. The Hamlin would have nothing to gain and everything to lose. The horse is a large earner, and as an exhibition miller. He is looked upon as the logical candidate for championship honors; his reputation has been established, and the risk of being beaten is so great that it is hardly likely that so good a financier as C. J. Hamlin will risk his money and his horse's reputation by matching him against such a horse as the chestnut stallion has shown himself to be. Possibly the sage of Village Farm has consulted with his astute trainer, E. F. Geers of Tennessee. If he has, he will not make the match, for the aforementioned Geers would probably tell him that Creusius can beat The Abbot a race of three in five or even two in three.

In point of speed The Abbot is the superior; that is, he can trot a quarter of a mile faster than can the son of Robert McGregory, but he lacks that tremendous courage that is such a noticeable characteristic of the stallion. While the winner of the stallion stake of Columbus somewhat overshadows the others it must not be overlooked that Grattan Boy trotted a wonderful race. His time was 2:06 1/2, and while he did not win, he helped make history by forcing the winner out in record-breaking time.

Grattan Boy is the fastest, gamest, truest bad galloped horse ever seen. He does not hop, nor skip, but he goes so well behind that the owner is that he can win a race. We are so smoothly and as easily galloped as some horses he would be invincible. His gait is typical of the Wilkes family in an exaggerated form, and if he were not such a veritable lion he would become worn out. His race reflects great credit on Roy Miller, who has trained and driven him admirably. Charley Herr, while somewhat outclassed, showed good form, and although he is the pacer that carried the pace is a mile in 5:04 in a race. There must be something in the air, for with Corey and Prince Alert flying in 2:08 or better and the 2:13 class being won and lost in such fast time, one is compelled to rub one's eyes with amazement. If our old friend, Joe Patchen, could know what was going on among these, his inferiors, he would smile, for fast as they may go they do not belong in his class or, for that matter, in the class of any really good horse. To-day a class of any really good horse is the pacer that carried the pace is a mile in 5:04 in a race. There must be something in the air, for with Corey and Prince Alert flying in 2:08 or better and the 2:13 class being won and lost in such fast time, one is compelled to rub one's eyes with amazement. If our old friend, Joe Patchen, could know what was going on among these, his inferiors, he would smile, for fast as they may go they do not belong in his class or, for that matter, in the class of any really good horse. To-day a class of any really good horse is the pacer that carried the pace is a mile in 5:04 in a race. 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## Home Circle.

Written for the RURAL WORLD.  
STANZAS TO A STAR.

Over sunlit sapphire seas I float  
Safe in Fancy's golden pleasure boat.  
With no fear of breaking, bending spar,  
Drifting on toward the evening star!

Ah, when life's fretful journey is run  
And the jeweled crown forever won,  
I shall would rest on the crest of star,  
O thought, enigma, sweet evening star!

Washington, D. C. — S. F. Gillespie.

Written for the RURAL WORLD.  
HAS THE FARMER'S WIFE ANY  
RIGHT TO MAKE MONEY?

Of all the to-morrow questions I ever saw  
brought up for discussion this is the most  
absurd. Some of the statements on both  
sides could easily make one think that the  
people who believe that the moon is made  
of green cheese are not all dead. For  
instance, we ran across an article the  
other day in which a woman said that  
"every woman had enough to do right in  
the house, without taking up any of these  
outside things."

Yes, that's it, shut her up in an eight-  
by-ten kitchen until her skin cracks open  
with heat. Let her dust, patch and scrub  
until she is a first-class candidate for the  
insane asylum. O, no! don't let her have  
any way of getting a dollar except what  
chance she has to coax one or two out of  
the old man when he is in a good humor,  
or to steal it out of his pants' pocket  
while he is asleep.

Then, some people say, she has no time  
or strength left after her other duties are  
done. Dear! dear! what an existence she  
must have if she cannot have a hobby.  
All people who amount to anything must  
have a hobby. Just show me a man or  
woman who hasn't got one or two of them  
and I will show you one of the most  
degenerate, uninteresting of human be-  
ings. And if a woman should have a hob-  
by, why not have a profitable one? I  
know a woman who took up fancy poultry  
for her hobby, and she writes and talks  
and is happy. She sells nice, big, fat  
cockerels and pullets to people who want  
nice stock and she has a purse full of  
money. O yes, she has a hired girl, of  
course. The old man has hired, too. Of  
course he could not do all the work  
and look after the fine cows and pigs.

One writer says that if she must earn  
money, she had better not have a home.  
O, my! doesn't that knock you off your  
feet? I know a woman who makes a  
specialty of making fine butter and sells  
it at a good price. In fact, she is an all-  
round business woman, and she has a nice  
home, too, and keeps everything in apple  
pie order; and when she sells five dollars'  
worth of butter on Saturday, she can  
buy many modern appliances to help make  
her work easier.

Then I know another woman who  
doesn't try to make any money; when  
she wants a dime to pay on the preacher's  
salary, or a quarter to pay her missionary  
society dues she has to go to the old man  
for it. Her sole ambition is to get her  
house cleaned up a little and then she  
sets in the buggy and goes over to some  
of the neighbors. She is posted on all the  
gossip, but says she has the best luck  
with chickens when she lets them shift  
for themselves.

I tell you what it is, every woman is  
going to have some kind of a hobby, if she  
has any snap at all, and I'd rather see a  
woman go along the road in her carriage  
with ten pounds of choice butter under  
the back seat and happy in her independ-  
ence, than to see one of the kind come  
along that hasn't got anything to interest  
her but the last bit of gossip she hap-  
pened to hear.

Go ahead, if you want to, work away in  
the kitchen until you look like a lobster  
in complexion and have about as much  
intelligence, keeping your mind on your  
housework until you are as dry as a chip!  
Then the old man will go to the saloon  
to have a good time or else hunt up an-  
other woman with more life and modern  
ideas. No, sir, give me the chance to earn  
a little money of my own. Let me get my  
mind off of dried apples and old socks  
that always need patching. No, the old  
man won't have a hobby. Give me a  
hobby, and go without socks, for I'll sell some  
thing and buy him a new pair now and  
then. And as to health, just you go into  
any little country town and see the old  
ladies of fifty or sixty years of age come  
in with butter, eggs, or young chickens,  
the product of their own toil in addition  
to home labor. See the cheerful faces,  
and the graceful graces they extend  
to each other! O yes! they are happy!

Then, see that banker's wife go sailing  
by in her fine carriage. She is pale, stu-  
pid, and exhausted by the hot weather.  
Her health is bad. She is perfectly list-  
less and has no vivacity whatever. It  
hasn't been the money making problem  
that has ruined her life. No, my dear  
friends, she has a hobby. Give me a  
woman with a hobby whether it is good  
turkey, fancy chickens, or a drove of nice  
turkeys. She is happy, a contributor to  
and a sharer in the world's wealth.

MARY ANN HODGSON,  
Richardson Co., Neb.

Written for the RURAL WORLD.  
FARM HOME WORK.

A very popular farm journal recently  
propounded to its contributors the follow-  
ing question for discussion: "To what ex-  
tent should time and labor saving devices  
be provided, and at what points should the  
men folks help in the home?" If the  
question had been asked, "What was not  
needed in the way of labor saving ma-  
chinery it would have been much easier  
to have answered. The up-to-date farmer  
provides himself with every piece of ma-  
chinery that will lessen his labors, or as-  
sist him in any way in producing more  
for his time and labor, and it is right that  
he should do so; but at the same time the  
farmer's wife should have the same pro-  
vision made for her needs.

Every farm home should be provided  
with a good washing machine and wringer,  
and patent churn, a sewing machine,  
and all the little inventions that can be  
had to lighten labor, as a meat cutter,  
apple parer, cherry pitter, ice cream  
freezer, egg and cream whip, patent bak-

**MRS. WINSLOW'S SOOTHING SYRUP**  
Has been used for over SIXTY YEARS by  
MILIONS OF MOTHERS for their CHILDREN.  
CURES ALL THE FOLLOWING AFFECTIONS:  
CUTS, SCALDS, BRUISES, SORES, WIND,  
COLIC, AND ALL THE PAINS OF INFANCY.  
It is the best remedy for DYS-  
ENTERY, and is sold by all Druggists in every  
part of the world. Be sure and ask for "Mrs. Win-  
slow's Soothing Syrup," and take no other kind.  
Twenty-five cents a bottle.

ing pans for baking bread and roasting  
meat, a bread raiser, egg poacher, rice  
boiler, steam cooker, flour sifter, a good  
variety of enameled pans, a good range  
of some kind, a carpet-sweeper and  
carpets to sweep with it. I have not  
copied this list from any house furnishing  
catalog, but I know the things named to  
be useful labor-saving articles, as I have  
them all and many more in my house and  
use them.

My latest addition to my supply of la-  
bor-saving articles is a kerosene stove of  
two holes with two burners to each place  
or hole. On it I can boil the kettle for  
supper and warm potatoes, cook sauce,  
eggs, or any light food in a very short  
time. I can cook my meal on it, cooking  
two kinds of food at once, but can do no  
baking. I find it very useful in canning  
fruit, as it does away with so much heat.  
I do not use it much for cooking except  
for supper. As we always have a light  
supper I find it invaluable. I have  
only used it this summer, but would not  
like to do without it now. I keep it in one  
corner of my dining room and it makes it  
so easy to prepare supper; while I am set-  
ting the table, the potatoes are warmed  
and the kettle boiled and supper is  
ready. It is just as safe as any kerosene  
lamp. I chose a kerosene, instead of a  
gasoline stove, as I thought we always  
keep a supply of kerosene on hand, and  
if we had to purchase gasoline especially  
for the stove we might sometimes run  
short, and I also considered coal oil  
safer to use than gasoline.

But with all the patent, labor-saving  
machinery and articles, one's muscles and  
nerves will tire and the housekeeper-cook  
must take a rest and for that purpose I  
have a patent swing chair, which I can  
use as a chair to sit in or a hammock to  
lie down in. It is piled with comfortable  
cushions, all washing machine and wringer  
for the stove we might sometimes run  
short, and I also considered coal oil  
safer to use than gasoline.

"When should the 'men folks' help?"  
It is difficult to tell just when; but I think  
whenever their work is not pressing and  
they can assist about the house, they  
should. Of course much depends on the  
amount of help there is in the house. If  
there is but one woman and one pair of  
hands must do the washing, baking, chur-  
ning, sweeping, dusting, ironing,  
kitchen, cleaning, dishwashing and cooking,  
besides looking after the poultry and  
helping in the garden, that one pair of  
hands is kept pretty busy and there are  
many chances for the "men folks" to  
help a little every day. I speak from ex-  
perience on this line, as I am the only  
woman at this home except when we  
keep a hired girl, which we cannot do all  
the time, as hired help is hard to get. But  
my "men folks" are willing and expect  
to help. They need to be brought into the  
water and fuel in the house, start  
the fire in the kitchen and in winter in the  
sitting room stove; and at meal time, if the  
food is not all on the table, when they  
are ready, they help dish it up and place  
it on the table. On wash morning one of  
the men expects to help with the washing,  
and I get breakfast on the oil stove while  
he starts the fire and puts the wash ba-  
sins on and fills them with water. By the  
time breakfast is over and I have the  
clothes ready and the water hot, the man is  
ready, having finished his barn chores.  
He turns the washing machine and wringer,  
and long before dinner time, if the  
weather be favorable, our washing is on  
the line and everything cleaned up and put  
away. The man brings all the water and  
empties all washing without being asked.  
If the field work is pressing I do not  
wash on Monday morning, but wait till  
the men have time to help me. Some-  
times we have while it is raining, as  
then they have plenty of time to help and  
I can put the clothes out when the rain  
is over; as the washing is done in the  
wash-house it makes no difference if it  
does rain in the tubs a few hours or even  
a day or night.

Sometimes the men churn for me during  
a shower. I like best to sell the milk  
cream, except what I want for the family  
use, but cannot always do so, and the  
cream must be churned to get what we  
can from the milk. There are number-  
less ways and many times in which the  
"men folks" can assist with the work in  
the house. The thoughtful, loving hus-  
band and son will be quick to see the op-  
portunity to help without being asked. But  
if one must depend a great deal on hired  
help, I think it would be all right to ask  
them to assist the housekeeper by bring-  
ing in water and fuel when it is needed  
and they are about the house.

If there be more help in the house than  
outside, if there be more women folks  
than men folks in the home then the help  
should be the other way. The girls should  
expect to help with the milking and an-  
other light chores outside that will not in-  
jure their health. There are many ways that  
a woman or girl can assist with the out-  
side work, such as feeding calves, milk-  
ing, raking hay, or running any of the  
farm machinery that does not require a  
great expenditure of strength. I would  
not advise any woman to over-tax her  
strength; but there is much light work  
that can be done outside that is really  
helpful. If the farmer be a lone man  
on the farm he will appreciate the help  
very much.

One other piece of machinery can be  
made of much help to the farmer's wife, if  
he uses it judiciously, that is the incu-  
bator for hatching poultry. The reason I  
speak of her using judgment in regard to  
the use of it, is because I have had some  
experience along that line. It really is  
such an easy way to hatch chickens that  
before one is aware of it one will have  
more chickens on her hands than she will  
have strength to care for, unless there be  
an abundance of help in the house. Sup-  
pose you take off a hatch of from 100 to  
125 chicks. The dear little fluffy things  
are so cunning and you feel so elated over  
your success in hatching that you think  
you will try just once more. The second  
hatch being equally as successful as the  
first you put on the third hatch. By the  
time that comes off you begin to realize  
you have got something to do to care for  
those chicks. If you brought them into  
the world motherless, you must be a  
mother to them. Then you begin to real-  
ize somewhat the duties of an old hen.  
Yes, sister farmer's wife, buy an incu-  
bator, but don't try to hatch more chickens  
than your strength will allow you to  
care for. Remember I am speaking from  
experience now, as I have had the chick-  
en fever and am now paying for it. Nev-  
ertheless I think the incubator a great  
help to the farmer's wife, but as I said in  
the beginning she must use it judiciously.  
There, I knew I could not finish this ar-  
ticle without getting off to the chicken  
business.

MRS. F. J. EDWARDS,  
Seward Co., Neb.

## BY THE SIDE OF THE ROAD.

There are hermit souls that live with-  
drawn  
In the place of their self content;  
There are souls, like stars, that dwell  
apart.  
In a fellowship firmament;  
There are pioneer souls that blaze their  
paths  
Where highways never ran;  
But let me live by the side of the road,  
And be a friend to man.

I see from my house by the side of the  
road,  
The men who press with the ardor of hope  
The men who are calm with the strife,  
But I turn not away from their smiles nor  
their tears.  
Both parts of an infinite plan,  
Let me live in my house by the side of  
the road,  
And be a friend to man.

Let me live in my house by the side of the  
road,  
Where the race of men go by;  
They are good, they are bad, they are  
weak, they are strong,  
Wise, foolish, and - no - I,  
Then why should I sit in the seclusion's  
seat,  
Or hurt the cynic's ban?  
Let me live in my house by the side of the  
road,  
And be a friend to man. - Credit Lost.

Written for the RURAL WORLD.  
A LETTER FROM NANCY.

"Poor old Mizuri" is right in "it" this  
year. Our friends write us that they never  
had finer prospects for good crops of  
everything. I see that California will have  
no peaches or apricots to export. So Mis-  
souri peaches will command good prices.  
Well, we are glad, though feel a little re-  
pentment withal for the five years of  
farm life in South Missouri not one was  
a good crop year.

We have had but one rain since early in  
the spring in this part of North Dakota.  
My husband and son are now plowing up  
our 40-acre field of earliest wheat. We  
have another 40-acre field of later plant-  
ing that may make a fourth of a crop if  
it is seasonable from now on. Most of  
our barnyard looks fine and our flax is a  
grand stand, but will never make any-  
thing without rain. So our first season in  
North Dakota hasn't been a very encour-  
aging one. Still we believe in the bright  
outlook of this great northern country  
and expect to stay with it.

Idyll, I suppose you've learned before  
this what a large slice of the income it  
takes to have horses shod, plows sharp-  
ened, vehicles repaired and to keep one's  
self in footwear. My husband and oldest  
son learned to shoe their own horses and  
bought a shoe repair outfit and did their  
own cobbling. Here our horses have gone  
without shoes all summer. They never  
show horses here unless they want to use  
a team in rough, slippery weather. Then  
they are rough shod.

We have just had a shower and are  
gaining withal a little longer toward the  
west, hoping for a literal downpour.  
It would be the salvation of thousands of  
immigrants who came to this country in  
the spring, many of them without homes  
and no way to gain a livelihood, with an  
entire failure of crops. This morning at  
sunrise the eastern sky was red and all  
day we have heard our neighbor's chick-  
ens crow-a-mile or more away. My bil-  
dies are all standing under the wagon oil-  
ing their plumage, my bang or "beau  
catcher" is all crinkled up, the flies are  
swarming and singing like bees and seem-  
ingly taking great bits of steak out of my  
tough old hands. There is a great black  
cloud looming up in the west and "Paola  
thunder" rumbles and roars. My little  
biddies are all seeking shelter; now sure-  
ly it will rain.

Later, we had our shower, but if  
we only could have a rain! How we enjoy  
looking right in the faces of our May  
Myrtle and Idyll. Now if we could get  
portraits of other correspondents.

Bottineau Co., N. D. NANCY.

Written for the RURAL WORLD.  
FLOWERS FOR WINTER.

To be preparing for winter when the  
heat of the sun is almost unbearable  
seems like being forewarned with a ven-  
geance; yet the woman who will have her  
flower window bright with blossoms and  
redolent with sweet odors must begin now  
to make her plans. Geraniums must at  
once be repotted and the hanging baskets  
renewed for the best effects during the  
winter.

The window garden of the busy woman  
should contain plants that will give best  
results with smallest amount of labor. But  
no window garden will thrive without  
care. Vines are almost essential in a  
tastefully arranged window. Many of the  
old-fashioned hardy ones prove most satis-  
factory if given proper care, so they will  
make luxuriant growth. Wandering Jew  
and ground ivy, if given light and mois-  
ture, will make riotous growth. Kon-  
nortiv ivy is a gem, but it will not flourish  
if treated well for a few days and then  
neglected for many.

Begonias are valuable, as they have  
handsome foliage; and if given the proper  
temperature and kept free from dust will  
make thrifty growth. The blossoms of  
many are very beautiful, the plant com-  
ing in flower for long periods. My best  
success has been when plants were kept  
where a moderate, even temperature  
could be sustained.

But don't omit a freezia. This is a  
bulbous plant, though friends have  
grown it from seed with splendid success.  
The bulb should be secured at once and  
planted in a soil one-half loam and the  
other half mold and sand. Don't plant in  
too large pots, but set the bulbs suffi-  
ciently deep to cover the tips. Give them  
good drainage and keep them in the dark  
until the young shoots appear. The flowers  
are white with yellow tinted centers  
and have a fragrance that is indescrib-  
able. No flower will repay more for care  
and attention than this. I have had good  
success in getting the plant in hot water every  
day or two during the winter and then plac-  
ing it in a sunny spot in the window.

St. Louis. ELSIE.

Written for the RURAL WORLD.  
DRYING CORN.

This is the season for drying green corn.  
Boil till the milk sets. Then cut from the  
cob and dry quickly. A better article may  
be produced by cutting half the depth of  
the grain, then scraping off the remainder,  
using care not to get any of the cob.  
Put in pans and set them in a moderately  
heated oven until the milk dries. This is  
more work, but sweet corn thus dried will  
be found equal to corn fresh from the  
field.

Jagua, Kan. ARAPAHO.

## HOW A BOY SUCCEEDED.

Boys sometimes think they cannot af-  
ford to be many and faithful to the lit-  
tle things. A story is told of a boy of the  
right stamp and what came of his faith-  
fulness.

A few years ago a large drug firm in  
New York City advertised for a boy.  
Next day the store was thronged with ap-  
plicants, among them a queer looking lit-  
tle fellow, accompanied by a woman, who  
proved to be his aunt, in lieu of faithless  
parents, by whom he had been abandon-  
ed. Looking at this waif, the advertiser  
said:

"Can't take him; places all full. De-  
sires, he is too small."  
"I know he is small," said the woman,  
"but he is willing and faithful."  
There was a twinkling in the boy's eyes  
which made the merchant think again. A  
partner in the firm volunteered the re-  
mark that he "did not see what they  
wanted with such a boy; he wasn't bigger  
than a pint of elder." But after consulta-  
tion the boy was set to work.

A few days later a call was made on the  
boys in the store for some one to stay all  
night. The prompt response of the little  
fellow contrasted well with the reluct-  
ance of others. In the middle of the night  
the merchant looked in to see if all was  
right in the store, and presently discovered  
this youthful protégé busy scissoring  
labels.

"What are you doing?" said he. "I did  
not tell you to sciss!"  
"I know you did not tell me to, but I  
thought I might as well be doing some-  
thing."

In the morning the cashier got orders to  
"double that boy's wages, for he is will-  
ing." Only a few weeks elapsed before a show  
of wild beasts passed through the streets,  
and, very naturally, all hands in the store  
rushed to witness the spectacle. A thief  
saw his opportunity and entered at the  
rear door to seize something, but in a  
twinkling found himself firmly clutched by  
the diminutive clerk aforesaid, and after a  
struggle, was captured. Not only was a  
robbery prevented, but valuable arti-  
cles taken from other stores were re-  
covered. When asked why he stayed be-  
hind to watch when all others fled their  
work, he replied:

"You told me never to leave the store  
when others were absent, and I thought  
I'd stay."

Orders were immediately given once  
more, "Double that boy's wages, for he is  
willing and faithful."

To-day that boy is a member of the  
firm-Sunday School Evangelist.

## SEASONABLE RECIPES.

### UNFERMENTED GRAPE JUICE.

Pick over the grapes and put on the fire  
with water enough to cover. Mash while  
boiling, and strain through a cloth. Boil  
the juice out. Put in bag, hang up and  
squeeze with scraggy squeezer until  
the juice is all out. Put back over the  
fire, adding one-third cupful of sugar to  
one quart of juice. Let it just boil up,  
not boiling it more than three minutes,  
and then bottle or can. It is very con-  
venient to put up in cans like other can-  
nied fruit, keeping it like them, in a cool,  
dark place. When using, about one-third  
of juice is used to two-thirds of water.

Rural New Yorker.

### ESCALLOPED CORN.

Cut fresh pickled corn from the cob and lay a greased  
pudding dish with alternate layers of corn  
and cracker crumbs. Sprinkle with butter  
and salt between each layer, and a little  
rich milk. Be sure to have it well moist-  
ened and cracker crumbs on top. Bake  
one hour well covered.

**CORN FITTERS.**—Two cupfuls of cold  
sweet corn cut from the cob (canned corn  
can be used instead), two eggs, one cupful  
of sweet milk, one-fourth teaspoonful of  
salt, one-half teaspoonful of soda and two  
tablespoonfuls of butter; add enough  
flour to make a good batter. Drop in  
spoonfuls in hot butter and fry brown.  
Serve for breakfast or luncheon.

**EGG LEMONADE.**—Allow one raw egg  
and a half lemon for each glass. Whip  
the eggs until very light and frothy, put  
in a portion of the lemon and water and  
beat again, then add the sugar, lemonade  
and strain. This is particularly palatable  
when made with plain soda water.

**DEVILED CHICKEN.**—Clean a good-sized  
chicken and cut it up as for frying.  
Boil until tender, remove all of the skin  
and bones, and set the meat away until  
perfectly cold. Then chop it fine and to  
each pint of chopped meat allow one-half  
pint of sweet cream, one tablespoonful  
of butter, three hea-bell seeds, three table-  
spoonfuls of bread crumbs, one-fourth of  
grated nutmeg and salt and pepper to  
taste. Mix the butter with the bread  
crumbs, chicken, cream and seasoning,  
stirring until it boils; remove from the  
fire and add the chopped up egg. Pour all  
into a baking dish, sprinkle lightly with  
cracker crumbs and brown in a "quick  
oven." This is nice for a picnic lunch.

**CHEESE STRAWS.**—Cheese straws are  
made with dessert, and are appetizing  
and ornamental. To make them, rub half  
a cup of butter into a cup of flour and  
add one teaspoonful each of salt and su-  
gar. Mix with cold water and roll out  
very thin. Have ready half a cup of  
grated cheese; sprinkle a little on the  
dough, with a very little cayenne, fold  
and roll again; sprinkle with cheese and  
continue until the cheese is all used. Roll  
into an eighth of an inch in thickness, cut  
into strips an eighth of an inch in width  
and five inches long, and bake on buttered  
pans to a very light gold in color. They  
should not brown. Roll the scraps that  
are left and cut into rings, bake, and  
when cold slip little bundles of the straws  
through them. A pretty china or crystal  
dish, holding one of these bundles of  
cheese sticks, or two of the dishes occu-  
pying opposite corners of a table or lunch  
table, are very ornamental.

A writer in the "Globe-Democrat" says  
the gritty substance in canned grapes and  
jellies can be prevented by cooking a  
piece of rhubarb with the grapes and with  
the jelly; it can be removed when the jelly  
is done. A small quantity of apples  
steamed with the grapes will also keep the  
grit from forming.

## A WIFE EQUAL TO A GOLD MINE.

My husband was a clerk, and I was anxious  
to help him, though I would sell my skin for  
a dollar, and do anything. A cent's  
worth of time will get me from one day  
to the next. I have a perfectly even heat. You can iron  
as the iron is so convenient and economical  
every body wants one. I make \$2.00 on each iron,  
and have not sold less than five any day I worked.  
My brother is doing well, and I think any one can make  
lots of money any time they sell these. Let  
Guaranty Insurance Light Co., No. 1015  
Street, St. Louis, Mo., start any one in the  
business as they did me. If you will address them.

MRS. V. KILBY.

## Poultry Yard.

### CHICKENS IN NORTH DAKOTA.

Editor RURAL WORLD: I want to  
tell the readers of the RURAL WORLD  
about my success with chickens this  
season. I have just 11 hens and only 11 were  
set. Three of those were set on turkey  
eggs. The remaining 11 I set, every one  
of them, and averaged ten chickens to  
each hatching. Now, I have 200 young  
chickens, possibly a few more or less, it  
is so hard to get an exact count. I have  
eight little turkeys, having lost none by  
disease, though several were killed by  
accident. My 60 first hatched chickens  
were all alive at six weeks of age. We  
fed whole wheat, oats, barley, etc., mix-  
ed. We fed the little ones crumbs of  
light wheat bread for five or six days af-  
ter hatching.

We are renting and have no hen house,  
so our hens roost in one corner of the  
barn. We use salt and sugar barrels, one  
side covered with tarred paper, put on  
with strips of wood or laths, with four or  
five holes bored in the end for ventilation.  
(I have just 13, all in a row), for brood  
coops. I have two feed coops or pens,  
one with slats close together for the  
youngest chickens. We left space enough  
between the feed pens for a water trough  
sunk in the ground, then let the cross pieces  
from one feed coop to the other, over  
which we spread boards to shade the  
water, there being no trees in this prairie  
country. Every two or three days we  
sweep out the brood coops and scatter  
lime all over the inside. We are very  
careful in cleaning the water trough—  
often putting Venetian red in the drinking  
water, and sometimes a few drops of  
carbolic acid. We are what one might  
consider very extravagant in the use of  
lime.

Try putting a little flour of sulphur  
down a chicken's throat that has the  
gapes. I should remark here that chick-  
en mites are unknown in this country.  
So lice, the large body lice, are the only  
insects infesting chickens that we have to  
fight.

Bottineau Co., N. D.

### BELGIAN HARE ASSOCIATION.

Editor RURAL WORLD: The Interna-  
tional Belgian Hare Registry Association  
is the title of an organization with head-  
quarters at Kansas City, Mo., U. S. A.,  
that is doing more to place the great and  
growing Belgian hare industry upon the  
high plane that it is worthy of and des-  
tined to occupy, than all other combined  
efforts heretofore put forth.

**PRINCIPAL OBJECTS.**—Some of the  
principal purposes of this organization  
are the protection of its members, as well  
as the public, from dishonest methods,  
fraudulent pedigrees, "padded" score  
cards, misrepresentations and other un-  
pleasant practices. The publication of an  
official record for the recording of  
Belgian hare pedigrees, together with  
their age, score, by whom scored, name  
of breeder, show records, etc., based upon  
a high standard of individual excellence,  
as follows: Hares will be accepted for  
record by this association provided they  
conform to either of the following require-  
ments:

**REQUIREMENTS.**—1. Animals scoring  
90 points or better and having an estab-  
lished pedigree of two full generations of  
ancestors.  
2. Animals deficient in the required  
amount of pedigree, but scoring 25%  
points or better.

3. Animals that score 90 points or better,  
whose immediate ancestors have been  
registered in the International Belgian  
Hare Registry Association's Stud Book.  
All scoring for registration purposes must  
be done by the association's official scor-  
ers. Fee for scoring, 25c; registering, 25c.  
**PREVENTS DISHONESTY.**—It will be  
impossible for dishonest persons to tam-  
per with a score card without detection,  
for the purchaser can refer to the secre-  
tary for the record of every animal that  
is registered, and if not registered, do not  
buy or breed to it.

**ACTIVE ASSOCIATE MEMBERS.**—  
Any Belgian hare club or association de-  
siring to promote the industry may be-  
come an "active associate" member of  
this association, and be represented by a  
delegate. The benefits to such club mem-  
berships are the right to hold shows under  
the rules of this association, to employ  
judges endorsed by it and to have all of  
its awards recognized by and become a  
part of the record of this association. The  
total cost of such membership is \$5 yearly  
dues.

**INDIVIDUAL ASSOCIATE MEM-  
BERS.**—Individuals may become "individual  
associate" members at a total cost of  
\$2 yearly dues, and receive four free reg-  
istrations during the year for which dues  
have been paid, and a copy of the Stud  
Book for that year at their benefits.

**SHOWS.**—All hares must be registered  
with this association before they can be  
entered in any show held under its rules.

ED R. ALLEN,  
Kansas City, Mo. Secretary.

### POULTRY EXPERIMENTS

At the Utah Experiment Station.

The Utah Experiment Station has been  
trying on, for the years past some  
elaborate and valuable experiments in  
poultry farming. These have been under  
the charge of Mr. James Dryden. Bulle-  
tin No. 67 gives the results of the third  
year's work in egg production at this sta-  
tion, together with the summing up of the  
results of the three years' work given here-  
with. The third year's work began No-  
vember 1, 1898, and ended November 1,  
1899. Some of the experiments originally  
planned have run the full period of three  
years. In addition to a continuation of  
the original work a set of feeding experi-  
ments was conducted during the third  
year. This latter work was made possi-  
ble by the erection of an addition to the  
poultry house which doubled the experi-  
mental capacity of the building and made  
possible the beginning of a work which  
should in time result in the accumulation  
of much valuable data on the relative ef-  
ficiency of different rations for egg pro-  
duction.

The experiments were designed original-  
ly to show:

1. The relative value of pullets and of  
hens one year old and two years old.
2. The effect of exercise.
3. The relative value of early and of  
late hatched pullets.</







